Letter - 1

Type - Agency

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
Denver Federal Center, Building 56, Room 1003
Post Office Box 25007 (D-108)
Denver, Colorado 80225-0007

July 8, 2008

9043.1
ER 08/587

Ms. Rhonda O'Byrne, District Ranger
Northern Hills Ranger District
2014 N. Main Street
Spearfish, SD 57783

Dear Ms. O'Byrne:

The Department of the Interior has reviewed the draft Environmental Impact Statement for the West Rim Project, Black Hills National Forest, South Dakota, and offers the following comments.

Section 3.9.2, Existing Conditions for Hydrology and Soils, Streamflow Regime, page 198, second sentence

A citation should be provided for the statement "An examination of annual peak flows by the USGS indicates that rainfall-only peaks account for 90 percent of the peak flows in the Black Hills."

1. A citation has been provided for this statement.

Chapter 5, Bibliography

The Peterson (1995) reference should be cited as follows:

Peterson, Richard A., 1995, The South Dakota breeding bird atlas. South Dakota Ornithologists' Union. Jamestown, ND: Northern Prairie Wildlife Research Center. Available on the Internet at: http://www.npwrc.usgs.gov/resource/birds/sdatlas/index.htm (Version 06JUL2000).

There is a more recent Sauer et al. reference that should be evaluated and new information that may be relevant to the proposed action incorporated into the final EIS. This reference should be cited as follows:

2. The specified references have been corrected. The Sauer reference has been reviewed and found to be consistent with the FEIS.

Sauer, J. R., J. E. Hines, and J. Fallon, 2008, *The North American Breeding Bird Survey, Results and Analysis 1966 - 2007. Version 5.15.2008.* United States Geological Survey, Patuxent

Wildlife Research Center, Laurel, MD. Available on the Internet at: http://www.mbr-pwrc.usgs.gov/bbs/bbs.html.

Thank you for the opportunity to review and comment on this DEIS. If you have any questions concerning our comments, please contact Lloyd Woosley, Chief of the USGS Environmental Affairs Program, at (703) 350-8797 or at lwoosley@usgs.gov.

Sincerely,

Robert F. Stewart
Regional Environmental Officer

LAWRENCE COUNTY COMMISSIONERS
P.O. Box F
90 Sherman Street
Deadwood, South Dakota 57732
Voice: (605)-578-1941
Fax: (605)-578-1065

July 17, 2008

Rhonda O'Byrne, District Ranger
Northern Hills Ranger District
2014 North Main Street
Spearfish, SD 57783

Re: West Rim Project Area EIS Comments

Dear Rhonda:

Please find enclosed the Summary of the Lawrence County Timber Committee and comments pertaining to the West Rim Project Area EIS.

On July 17, 2008, the Lawrence County Timber Committee presented this Summary to the Lawrence County Commission. At which time, the Commission unanimously concurred with the findings and suggestions of the Timber Committee as set forth in the Summary, and further that the Summary be forwarded to you as the County's official comment on the West Rim Project Area EIS.

As always, the County Commission very much values the opportunity to offer input on USFS projects planned in Lawrence County. The Commission hopes that the USFS will carefully consider the Summary submitted and the recommendations contained therein.

If you have any questions concering the Summary, please contact Bill Coburn of the Lawrence County Timber Committee. Otherwise, thank you for your attention and cooperation in this matter.

Sincerely,

Terry W. Weisenberg
Chair

Cc: Craig Bobzien
Forest Supervisor

EQUAL HOUSING OPPORTUNITY

EQUAL OPPORTUNITY EMPLOYER

Letter - 2

Type - Agency

SUMMARY OF THE TIMBER COMMITTEE

Comments on the West Rim Project Area EIS

Introduction: The Timber Committee of the Lawrence County Environmental Review Ordinance consisting of Bill Coburn (Chairperson), Dean Rasmuson Paul Schipke and John Frederickson respectfully submits the following findings and comments to the Lawrence County Commissioners.

Custom, Culture and Economic Stability: The harvest of timber and the production of wood products has been and currently is an important part of the custom and culture of Lawrence County. Historical documents give evidence that when this county was settled during the late 1800's many people were gainfully employed in the harvesting of trees for the many types of wood products that these early settlers needed. It is estimated that by 1897 over 1.5 billion board feet had been harvested from the Black Hills for use by these earlier settlers. The harvest of this timber also created wealth for the people by providing much needed jobs and economic activity. The 1940 census shows that 1022 people were directly employed by the forest products industry. Unfortunately the census does not indicate whether this included loggers. 1990 census indicates that almost 500 people were employed in Lawrence County by this industry providing over $14 million in wages and benefits. The Forest Products Industry continues to be an important part in Lawrence County economic engine providing over 350 direct jobs working for Spearfish Forest Products, Hills Materials Sawmill and Post and Pole Operations, Wheeler Bridge and Waupaca Materials. Supporting these primary and secondary wood products processing plants are hundreds of loggers and truckers that haul logs, posts and sawmill by-products.

These wages are some of the highest paid by any industrial sector operating in the county. The economic impacts that Lawrence County receives from the Black Hills National Forest selling timber is significant. The county also recognizes that the main purposes for managing the national forests as mandated in the **"Organic Act"** was **"to preserve and protect the forests", " to furnish a continuous supply of timber for the use and necessities of the citizens of the United States",** and **"to secure favorable conditions of water flows".** The first timber to offered for sale under this Act in the United States was sold to Homestake Mining Company in Lawrence County in 1898.

General Comments: In light of the importance of the timber industry and the selling of National Forest timber to the custom, culture and economic stability of Lawrence County, the Timber Committee expresses the following comments and concerns in response to the Black Hills National Forest's for the West Rim Environmental Impact Statement. Our committee recognizes the tremendous challenge that the USFS is faced with in preparing a suitable document and plan. Our intent is to assist the Black Hills National Forest in preparing a project that will have the most positive benefits on the citizens of Lawrence County

West Rim Comments

Project Area is located on both sides of Spearfish Canyon running from the north end all the way to the Cheyenne Crossing, east to the Terry Peak Subdivision and west 6.5 miles. The project contains 43,000 acres of BHNF and 10,000 acres of private land. Special areas within the project boundaries include Spearfish Canyon and Creek, Spearfish Mountain, Terry Peak, Iron Creek Lake and Bridal Veil Falls. Lawrence County is a cooperator to the USFS on this project. Our involvement has been somewhat limited due to delayed cooperator invitation and also that the analysis of this project was subcontracted to a private contractor in Colorado.

The USFS identified the Purpose of and Need for action on this project is to reduce fire hazard and the risk of mountain pine beetle infestation and to increase structural diversity.

The USFS is proposing 3 alternatives: Alternative A is a no action alternative; Alternative B is the proposed action alternative and Alternative C is a alternative that the USFS designed to meet the counties desire to treat more of the Wildland Fuels in the WUI areas within the project area. Both action alternatives propose to harvest about 59 million board feet. There is a total of over 400 million board feet of commercial timber growing within the project boundary.

Mountain Pine Beetle

In our scoping comments we identified a significant outbreak of mountain beetle near Cheyenne Crossing an recommended that the USFS include this area in the project. The USFS after some consultation with the county and canyon residents decided that this problem would be better addressed through a Categorical Exclusion (CE). This is a concern if the USFS does not follow through in a timely way. This outbreak has the

3. Thank you for your comments.

4. In addition to the reduction in risk of mountain pine beetle from the proposed treatments, there is also a sanitation harvest provision in the FEIS (pages 34-35) that allows the Forest Service to react quickly to beetle infestations.

potential to cause serious damage in this area. The remaining project area does not seem to have any real serious outbreaks. The USFS proposed treatments should help minimize future risk for the next 10 to 15 years in the stands that are going to be treated.

Structural Diversity

In reviewing the projected outcome based on the proposed treatments it appears that the USFS is going to make significant progress in moving this projects structural diversity towards the Forest Plans goals. We applaud the USFS in their efforts to improve structural diversity.

Late Succession Structural Stage 5. The USFS states that there is a deficit of late successional stage in the different management areas. In contrast there is no reference in the document that recognizes the large amount of late successional stage acreage that exists in Spearfish Canyon. This late successional area provides considerable habitat for dependent species and we request that the USFS include some discussion that this structural stage exists and contributes to the vegetative diversity and habitat for dependent species within this project. We understand that these acres do not contribute to each of the other management area SS5 objectives.

Reduce Wildfire Hazard

Reducing Wildfire Severity Hazard is probably one of the most important goals for the County. Lawrence County has experienced several major WUI fires with the most recent the Grizzly Gulch fire causing much destruction and costs. In response to these risks and under the auspices of the Healthy Forest Restoration Act, Lawrence County had a Community Wildfire Protection Plan written 2007. The HRFA legislation includes statutory incentives for the USFS to collaborate with counties with CWPPs and give their recommendations preferential consideration and priority.

There are two major areas of WUI in this project: Spearfish Canyon and the Terry Peak Subdivision. Both of these areas contain significant numbers of seasonal and yearlong residences. The Lawrence County CWPP recognizes these areas as having high to extreme hazard to wildfire. The LC CWPP recommends to the USFS a system of buffers. The first buffer would be established ½ mile around structures and recommends that there should be 20 foot crown spacing and that ladder fuels should be minimized and ground fuels mitigated. The SD State Division of Wildland Fire Suppression recommends

5. An analysis of the distribution of the structural stages within Spearfish Canyon was not included in the FEIS because the Forest Plan does not set distribution goals for this management area (MA4.2A). An area of 143 acres of late successional habitat (structural stage 5) has been identified within Spearfish Canyon (MA 4.2A). As with the rest of the West Rim Project Area, Spearfish Canyon is dominated by mature forest stands (structural stage 4). There are more than 8,000 acres of SS4 in the canyon.

6. Thank you for your comments.

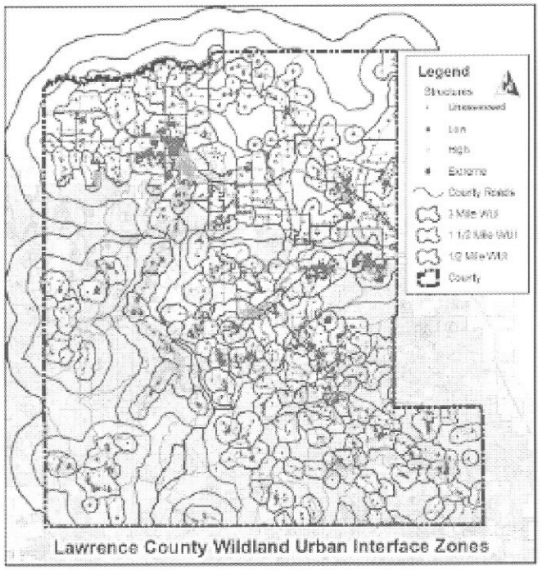
12 foot to 18 foot canopy spacing in areas not directly around homes and 15 foot to 20 foot canopy spacing around homes.

The second buffer extends out 1 ½ miles from the structures and recommends that there should be at least a 10 foot canopy spacing. Higher stocking levels could be stocked at higher levels if their existence does not threaten WUI values. This second buffer is designed to reduce fire intensity as it comes closer to private property.

The third buffer has a 3 mile zone and its intention is to reduce the intensity of uncontrolled wildfires. To help accomplish this the USFS is encouraged to increase structural and vegetative diversity especially encouraging hardwoods. This buffer zone goal is provide strategic design to promote the survivability of the forest and people from a serious wildfire.

Lawrence County Wildfire Hazard Map CWPP

6. See Response to Comment 6 on previous page.



There is not much difference between 2 action alternatives. The only major distinction is that Alt C allows for fuels treatments within 300 feet of all private structures on USFS lands and proposes several additional fuel breaks. It would add 928 acres to the total treatment acres. Within the 300 foot radius there is also 760 acres of private land that the USFS is not proposing any treatments. The county is cooperatively working with state agencies and local residents to treat these areas and has offered financial assistance to both the USFS and private landowners to help treat these fuels.

We are also concerned that the USFS has indicated that when this decision is signed the two ongoing CE fuel treatment projects will be stopped. We encourage the USFS to finish the treatments that they proposed in these earlier projects. We prefer Alternative C because this alternative will treat areas around structures especially in Spearfish Canyon and create several additional fuel breaks. We do have some concerns about the restrictions or design criteria that the UFSF has placed on itself regarding these fuel

7. The Spearfish Canyon 1 CE has been completed since work on the West Rim EIS began. The decision was made to super cede the Spearfish Canyon 2 CE to avoid situations where treatments overlap and responsibility for carrying out those treatments becomes unclear (i.e. USFS under the CE, or the private landowner under the West Rim EIS). Also, the treatments proposed under Alternative C of West Rim would provide more defensible space (up to 300 feet versus 100 feet) than the treatments authorized under Spearfish Canyon 2.

8. See Response to Comment 8 on next page.

treatments. The foremost concern is that the USFS is prohibiting the cutting of any trees greater than 9 inches. We have consistently explained to the USFS that removing only the small trees in and around these structures will do very little to mitigate the wildfire risk in the WUI area. The USFS is prohibiting these treatments due mainly to trying to protect snail habitat. The USFS has identified only 13 acres, in their limited surveys, as having suitable snail habitat yet these snails exist throughout the canyon (page 27) and even the USFS admits that this is causing serious planning problems for them. If these snails are as numerous as they appear then we would suggest that treating only the WUI areas would not be detrimental to the viability of the entire population. On the other hand if there are snails on only 13 acres then drop those acres from being treated and treat the remaining 673 acres (686-13). Bottom-line, it is very important that if the USFS is serious about decreasing the severity of wildfires in the WUI areas then they need to address all of the live fuels and not just the less than 9 inch dbh trees. We request that the Supervisor make a decision that allows for the treatment of all live fuels within the 300 foot zone. We also believe that treating these areas to decrease the risk of a severe wildfire is in the snails best interest since a fire of this magnitude would ultimately destroy the snails habitat. Objective 234 of the Phase 2 Amendment was written for this situation.

> 234. *NEW. Create or maintain a moderate-to-low crown-fire hazard adjacent to occurrences of R2 sensitive and species of local concern plants and botanical areas bordered by continuous, dense conifer stands where long-term persistence is at risk from a single high-intensity fire.

Prescribe burning,

The single largest type of treatment is prescribe burning. The USFS is proposing to burn over 13,000 acres. We continue to support well planned prescribe burns where stands are pretreated by mechanical means to reduce stocking and live fuel levels. In our scoping comments and GIS information we indicated to the USFS that they were planning on prescribe burning some stands that have high stocking levels and crown closure. Prescribe burning stands with this type of stand condition that have not had recent prior harvest treatments is very risky and does little to mitigate fuels problems and improve forage. We are also concerned that there are no design criteria for mortality and no mention of mortality standards for overstory. In past projects the USFS has stated that overstory mortality would be limited to 10% or less for the entire prescribe burn. We are very concerned that without such parameters the USFS will have no incentive to limit mortality to the forest overstory. We also would suggest that the USFS include some

8. WUI treatments are designed to balance the needs of wildlife and protection from wildfire. Surveys for emphasis snail species require a taxonomic expert to identify to the species level, therefore limited surveys for snails have been completed since Frest and Johannes in 2002. However, conditions in Spearfish canyon are suitable for snail habitat, and Frest and Johannes (2002) state, "Land snail diversity is concentrated in certain portions of the Black Hills National Forest... preeminent is Spearfish Creek and Spearfish Canyon" (FEIS pages 130-131).

   Many of the overstory trees in Spearfish Canyon are white spruce, which is of little commercial value (and therefore difficult to sell) and is also prone to windthrow when thinned.

   The Canyon is highly valued for scenery values and removal of large amounts of overstory spruce is likely to have a negative effect on the visual landscape.

   The snail standard (3103) directs the Forest Service to "retain overstory sufficient to maintain moistures regimes" and "avoid...heavy equipment and other activities that may compact soils or alter vegetation composition and ground cover" in known snail locations. Because the entirety of Spearfish Canyon has to potential to contain snails, this standard limits the opportunity to remove commercial sized trees.

9. The level of acceptable mortality will be determined by the district silviculturist on a site by site basis during the development of the prescribed burn plan. The design criteria have been modified to address overstory mortality (see Appendix B).

provision for salvage logging to occur if the prescribe burn kills a significant amount of the overstory. Another concern is that we would like to see the USFS not burn stands where the understory is advanced in age and adequately stocked. It make no sense to kill 20 year old understory only to later on apply some type of regeneration harvest to then regenerate the stands.

Species of Local Concern

We are concerned about the impacts of how Species of Local Concern has on potential management activities. The USFS design criteria states that all SOLC shall be avoided. Why. Has the USFS completed the effects analysis on this type of management approach. Since these species failed to meet the criteria for sensitive status why is avoidance the only option. Avoidance is the most restrictive approach and could result in significant decreases in areas that could be managed or make it impossible to access areas where management could or should be done. We would suggest that working on frozen ground might be an acceptable approach to some selected SOLC. It is also important to note that many of these areas have previously experienced timber harvesting in the past. We question why the USFS is not looking at past experience to understand what level the impacts will be in the future.

The Region 2 Planning Desk Guide (USDA Forest Service 2003b) defines species of local concern (SOLC) as species that failed to meet the criteria for sensitive status. These could include species with declining trends in only a portion of Region 2, or those that are important components of diversity in a local area. The Forest defined the local area as NFS lands within the Black Hills National Forest.

The process for of selecting SOLC is outlined in detail in "Process for Identifying Wildlife and Plant SOLC and Results" (Allen et al. 2005). The process used to identify SOLCs was adapted from the process developed and used in the Chugach National Forest (Suring and Murphy 1998) and the R-2 process to identify emphasis species, including SOLC (USDA Forest Service 2003b).

Preliminary analysis indicates that there is around 7000 acres designated to be avoided due to SOLC. This is 16% of the project acreage.

Hardwood Management

We do not agree that all conifers should be cut and left in Hardwood Restoration Units especially where their locations make it impossible to establish barriers to elk and deer. For example if the conifers are only scattered on one end of the aspen stand how does cutting and hinging the conifers prevent the animals from entering from other sides? If this practice is applied we would request that the USFS monitor the results to determine whether this is a effective way of reducing predation on aspen sprouts. It is our opinion that the USFS is better served by cutting large areas of aspen at a time and oversupplying the demand. This has worked in many areas (ie along FDR 134 and 222)

10. The burn blocks are created based on the best available scenario for road to road containment, which reduces the amount of hand and dozer line that must be created. Not every acre within the burn blocks would necessarily be planned for prescribed burning, but those acres would be available for burning if the need or opportunity arises in the future.

11. The West Rim geodatabase shows that 5,073 acres of suitable plant habitat were identified in the Project Area. Of that suitable plant habitat, approximately 3,800 acres lie within units proposed for commercial timber harvest.

    Avoidance of suitable plant habitat has been identified as the best method of preserving this habitat in its current state. The analysis of this approach is contained within the West Rim DEIS as well as in the Citadel EIS completed in 2007.

    Forest Plan direction calls for multiple use management, balancing a variety of natural resources and uses of those resources. This strategy is a method of balancing timber harvest with preservation of native, rare plant communities.

12. Larger conifers would be removed from the commercial hardwood enhancement units. Post treatment activities include vegetation surveys within the hardwood enhancement areas. These surveys help monitor the success of the prescribed treatments.

Protection of Soil and Water.
The Design criteria (DC) specifies that heavy equipment would avoid streams and swales except to cross at designated points build crossings, or conduct restoration unless protected by at least one foot of packed snow or 2 inches of fozen ground. What is a swale? As we stated earlier there has been extensive timber harvesting in most of this area over the last 100 years. What has been the impact? Short term vs long term?

We would also question why the USFS refused to include managing for Water Quality and Quantity as a Purpose and Need. Spearfish Creek is a very important asset to the county as well as to the Black Hills and protecting water quality and improving water flow (Black Hills Forest Plan Objective 108, Forest Standard 1209 and 1210) should be an important consideration in determining management strategies in this project. As has been repeatedly pointed out even by the USFS the extent and density forest cover is significantly greater now than it was 100 years ago. This has had a tremendous diminishing impact on water production from our forested watersheds. In addition, allowing these areas to become increasingly thicker with tree cover increases the risk of a major wildfire which in Spearfish Canyon would be devastating. One only has to read of the accounts of 1996 Buffalo Creek Fire in Colorado and look at the impacts of the 1988 Westberry Fire on Canyon Lake to understand the detrimental impacts of large wildfire in Spearfish Canyon. Even the Regional Forester Rick Cables raises this concern in an address to the press in May, 2008. "When we turn on our faucets, we tap into our forests. Let's continue to join hands to care for the forests in the headwaters as a legacy for our children"

Missing Data
We noticed that at least some Mineral Project stands located southwest of Terry Peak development were not identified in your past timber sale layer.

We appreciate the opportunity to work with USFS on this project and look forward to improving this project so that it meets the needs and desires of the citizens of Lawrence County and the rest of the country.

Respectively submitted,

Bill Coburn

13. A swale is a depression that gathers and holds more water than the surrounding area. The intent of the design criteria is to avoid adverse impacts. There have been impacts to streams from logging operations in the past 100 years. The design criteria would protect water quality.

14. As this comment points out, managing water quality is one of the core missions of the Forest Service. It is part of the Proposed Action and alternatives. Alternatives B and C would reduce the consequences of a large wildfire on water quality. The analysis presented in the FEIS (pages 214-215) concludes that the amount of timber harvesting required to provide an increase in water yield would be on the order of 20-25 percent of the forest in a clearcut condition. Most of the treatments proposed would not achieve that condition.

15. The Mineral project stands were erroneously omitted from the sale layer but were considered during the cumulative effects analysis for West Rim.

    All stands proposed for treatment under the Mineral project were deferred under West Rim. The Mineral stands to the southwest of Terry Peak have not been treated yet because of road access issues, but NEPA analysis has been conducted on them and treatment could take place if access through private land is obtained.

<Amber.Brady@state.sd.us> To: <comments-rocky-mountain-black-hills-northern-hills@fs.fed.us>
cc:
07/21/2008 10:08 AM Subject: West Rim Draft EIS

Letter - 3

Type - Agency

Below are comments on the West Rim Draft EIS from the South Dakota Department of Agriculture, Division of Wildland Fire Suppression.

Please contact me if you have any questions.
Thank you.

Alternative B is the preferred approach, as it meets the purposes of reducing fire hazard(s), reducing the risk of mountain pine beetle infestation, and increasing structural diversity across the Project Area. Alternative B will help landowners that are not within the scope of another project by the Northern Hills Ranger District, such as Spearfish Canyon Fuels Reduction I & II, and it does not put the burden of fuels reduction on the FS lands onto the landowner.

Alternative C would increase the fuels reduction efforts around the private lands within the Spearfish Canyon area to 300 foot buffers, but this alternative places the burden on the landowner to write the work plan, meet all guidelines of the FS, and then the costs would also be the responsibility of the private landowner.

16. Thank you for your comments

Amber S. Brady
General Counsel/Director of Agricultural Policy
South Dakota Department of Agriculture
523 E Capitol Ave
Pierre, SD 57501-3182
(605) 773-4234
(605) 773-4003 (fax)
amber.brady@state.sd.us

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
http://www.epa.gov/region08

Letter - 4

Type - Agency

Ref: 8EPR-N

Rhonda O'Byrne
District Ranger
Northern Hills Ranger District
2014 North Main Street
Spearfish, SD 57783

RE: West Rim Project, Draft
Environmental Impact Statement
CEQ# 20080218

Dear Ms. O'Byrne:

The Environmental Protection Agency (EPA) Region 8 Office has reviewed the Draft Environmental Impact Statement (DEIS) for the West Rim Project on the Black Hills National Forest (BHNF). The EPA reviews EISs in accordance with its responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act. Section 309 of the Clean Air Act directs EPA to review and comment in writing on the environmental impacts of any major federal agency action. The EPA's comments include a rating of the environmental impact of the proposed action and the adequacy of the NEPA document.

The proposed action includes a variety of vegetation treatments and expansion of a transportation system to provide access to treatments. Within the project area, this includes commercial timber harvest on 13,379 acres, non-commercial harvest on 13,713 acres, prescribed burning on 13,226 acres and fuel reduction treatments on 468 acres. The project also includes construction of 35 miles of new roads, and reconstruction of 126 miles of existing roads necessary to access timber stands. The DEIS states that all new roads built for this project would likely be closed following harvest activities, and that road closure decisions will be made by the Travel Management Plan currently underway. The key issue identified as the focus for the project is fuel reduction in Spearfish Canyon, specifically in the wildland urban interface (WUI).

EPA is primarily concerned about impacts to water quality, aquatic resources and wildlife habitat from new road construction and the associated harvest activities. We are concerned that

the transportation system is being expanded at the same time Forest Service road maintenance budgets are being reduced. Inadequate management and maintenance of the existing system and non-system roads can damage water, soil and habitat resources. EPA is particularly concerned that decisions about where to expand the road network have been made prior to completion of slope stability surveys. According to the DEIS, the West Rim project area is located in areas marked by steep to very steep sideslopes, narrow valley bottoms and degraded stream channel conditions (page 195). Furthermore, all eight timber sale units surveyed during the soil health assessments were considered "at risk" for soil erosion. Map A-3 identifies the network of proposed new roads. Due to the steep topography of this project area, EPA recommends that the Forest Service complete and consider the results of slope stability surveys prior to identifying an expanded transportation network for new treatments.

17. All new roads would be closed following use. Reconstruction of existing roads would reduce the risk of erosion from those roads (FEIS page 220). The upcoming forest-wide Travel Management Plan will designate routes for specific uses, which will aid in prioritizing maintenance funds.

The DEIS states that Lower Spearfish Creek, Cleopatra Creek and Iron Gulch are Class III watersheds of "high concern." These are watersheds in which "management activities must be done with great care" and watershed improvement activities must be part of project planning. (page 199). While the maps show extensive road construction, clearcutting, thinning and fuels treatment in those areas, the DEIS does not include any information on watershed improvement activities. This appears inconsistent with the BHNF's requirement that management activities in Class III watersheds can only occur if they do not degrade the watershed further (page 200). The FEIS should include the best management practices and mitigation commitments that will describe how overall improvement of watershed conditions can be expected to be achieved along with the proposed treatments.

18. Slope stability surveys would be completed during the implementation of the project. New roads would avoid steep slopes (FEIS page 223) and unstable slopes. The soil health assessments show that past timber harvesting showed only limited areas of soil erosion and compaction mostly associated with roads (FEIS page 220).

EPA would like to have seen an alternative that limited management actions to those areas accessible by the current road system. The West Rim ID team did not consider an alternative that avoids new road construction, and instead proposes adding 35 miles of new road to the transportation system. The DEIS also states that no roads are proposed for decommissioning because the BHNF is currently in the process of revising its Travel Management Plan, which will identify which routes are necessary and what uses will be allowed on them. The Travel Management Plan will supersede any decisions made at the project level (page 34). It is unclear how these proposed new roads will be incorporated into the current Travel Management Planning process. As the DEIS states, roads are considered the primary contributors of sediments to streams in managed watersheds (page 202). Roads also contribute to increased stream siltation, mass movement and erosion, damaged plant habitat and increased wildlife habitat fragmentation. EPA recommends that the Forest Service consider an alternative that does not expand the existing transportation system until the Travel Management Planning Process is finished. Management activities could instead be intensified in areas already accessible by existing roads.

19. The Class III watersheds would have several beneficial effects from the proposed activities. The number of connected disturbed areas (CDAs) would be reduced (FEIS page 211). The positive effects of fuels reductions would result in lower intensity wildfires should they occur. Several existing roads in those watersheds would be reconstructed likely resulting in lower sediment yield and the road density would be required to be maintained at current levels or lower through the Travel Management Planning process (FEIS page 216).

20. The ID Team has reviewed the recommendation for an additional alternative and has documented their results in Section 2.3 of the Final EIS.

EPA evaluates the potential effects of proposed actions and the adequacy of the information in the DEIS. We rate this DEIS an "EC-2" (environmental concerns, insufficient information) under EPA's enclosed ratings criteria. The EC rating indicates that the reviewer has identified environmental impacts that should be avoided in order to adequately protect the environment. The EC rating is based on EPA's concerns regarding the potential adverse impacts to water quality, soil erosion and wildlife habitat from the Proposed Action. The potential for

21. Thank you for your comments. These comments will be considered during finalization of the FEIS.

2

significant environmental degradation can be reduced by modifying the project to 1) eliminate or reduce the miles of new road construction and 2) include watershed improvement activities and mitigation commitments in Class III watersheds. The "2" rating means that the DEIS lacked sufficient information and analysis of an alternative that could achieve the fuel reduction goals in Spearfish Canyon while minimizing or fully mitigating the adverse impacts to water, soil, wildlife and other resources. Impacts to those resources should be quantified and better described in the FEIS. A copy of EPA's rating criteria is attached.

EPA appreciates the opportunity to review and comment on the DEIS and your willingness to consider our comments at this stage of your planning process. If we may provide further explanation of our concerns please contact Jody Ostendorf of my staff at 303 312-7814, or me at 303 312-6004.

Sincerely,

Larry Svoboda
Director, NEPA Program
Ecosystems Protection and Remediation

Enclosure:

Ratings criteria

3

Biodiversity Conservation Alliance

Working to Protect Native Species and Their Habitats

P.O. Box 1512, Laramie, WY 82073 (307) 742-7978 fax: 742-7989

Letter - 5

Type - Organization

July 21, 2008

VIA EMAIL: comments-rocky-mountain-black-hills-northern-hills@fs.fed.us

Rhonda O'Byrne, District Ranger
Northern Hills Ranger District
Black Hills National Forest
2014 N. Main Street
Spearfish , SD 57783

Re: West Rim Project

Dear Ms. O'Byrne:

Biodiversity Conservation Alliance, Prairie Hills Audubon Society, Nancy Hilding individually, and Duane Short individually, submit these comments in response to the June 2008 Draft Environmental Impact Statement for the West Rim Project (henceforth "West Rim timber sale").

First, only two action alternatives are presented in the DEIS. A No Action alternative is merely a default alternative. This offers the public the minimum number of options from which to select actions. Given the scope of the proposed project, two alternatives fails to satisfy the 'hard look' requirement established in the National Environmental Policy Act (NEPA) and fails to present the public an adequate array of management actions to evaluate.

We have previously expressed numerous concerns over the significant adverse effects of excessive timber harvest, thinning (commercial and noncommercial) and associated activities (e.g. extensive road construction) on the BHNF.[1] For the purposes of these comments, we incorporate by reference all previous submissions listed in the footnote below.

While we have many concerns over the West Rim timber sale, we are most concerned that the proposed vegetation treatments do nothing to benefit biodiversity on the BHNF and instead perpetuate and exacerbate the ecological problems plaguing this unique

[1] See e.g., Biodiversity Associates et al. Appeal of 1997 BHNF Revised Land and Resource Management Plan, Biodiversity Associates et al. Peak Project Appeal, Biodiversity Associates' et al. comments on the Phase I Amendment to the BHNF Revised Land and Resource Management Plan ("Phase I Amendment"), Biodiversity Associates' et al. Appeal of the Phase I Amendment, and Biodiversity Associates' et al. scoping comments for, and appeal of, the Phase II Amendment to the BHNF Revised Land and Resource Management Plan, Biodiversity Conservation Alliance Scoping Comments West Rim Project, October 10, 2007. For the purposes of these comments, we incorporate by reference these previous submissions and request all concerns, questions, comments, and requests within these documents be fully considered in any and all environmental analysis completed for the West Rim timber sale.

22. The content analysis conducted on the scoping comments revealed two significant issues; fuel reduction in Spearfish Canyon and Mountain pine beetle infestation near Cheyenne Crossing. The Mountain pine beetle issue was deferred (FEIS page 24). Therefore, fuel risk reduction in Spearfish Canyon was the focus of the Alternative C.

    The differences in alternatives are how the WUI areas in Spearfish Canyon are treated. Many other alternatives were considered by being eliminated from detailed analysis (FEIS pages 36-38) for various reasons.

23. The comments in the references were addressed previously during those specific projects. Please refer to those responses.

24. See response to comment 24 on following page.

ecosystem. Spearfish Creek and Spearfish Canyon are particularly sensitive areas with sensitive and dwindling native species. This timber sale does not addresses and simultaneously exacerbates snag shortages, old growth shortages, fragmentation of late successional and dense mature forest habitat. The West Rim timber sale will also exacerbate declines in habitat and populations of species dependent upon late successional and/or dense mature forest habitat. Several plant and animal species are extremely sensitive to the impacts of logging and thinning on the BHNF. Therefore, we, again, request the Forest Service ("FS") not log, thin, or implement any other vegetation management and instead focus on road decommissioning and closures to address the adverse impacts associated with unreasonably high road densities, poorly designed stream crossings, erosion, and other ecological problems associated with roads.

USDA Forest Service published a document titled, Threatened and Endangered & Sensitive Species Program" to explain the Service's position.

> *"There are several factors that can lead to endangerment and extinction of species. The single-most important one--and the one the Forest Service has the greatest influence over--is the alteration and loss of habitats."*

Impacts are not Fully Analyzed and Critically Assessed in the DEIS

We request the FS fully analyze and assess the direct, indirect, and cumulative impacts of the West Rim timber sale to the following:

- Livestock grazing

The FS must fully analyze and assess the cumulative impacts of livestock grazing to the forests of the West Rim timber sale area. Livestock grazing and browsing results in significant negative impacts to forest understory and forest floor duff layers are significantly disturbed and surface vegetation trampled under hoof (Belsky, A.J. and D.M. Blumenthal. 1997).

- Northern goshawk and its habitat

The DEIS does not fully analyze and assess the potentially significant effects to the Northern goshawk using quantitative population information as a context for the assessment (i.e., how many individuals out of the population will be impacted). The DEIS fails to fully analyze and assess the potentially significant effects to potential goshawk nesting habitat (i.e., ponderosa pine vegetation structural stages 5 and 6) regardless of whether the habitat exists within a known territory, the potentially significant effects to goshawk post fledging habitat, and the significant effects to goshawk foraging habitat. In light of many cumulative adverse effects to the Northern goshawk and its habitat over the last few years (e.g., nest vandalism, fires, etc.), we request that all late successional habitat and stands of structural stage 4C and 4B be deferred from any treatments in order to ensure an adequate amount of goshawk nesting habitat is protected.

2

24. The purpose and need for this project is to reduce fire hazard and the risk of mountain pine beetle infestation, and to increase structural diversity (FEIS pages 6-7). The Project Area currently has a higher percentage of dense mature ponderosa pine than before fire suppression. Creating more structural diversity will provide for more diverse habitat that would increase biodiversity. Unnaturally intense wildfires would also reduce dense forest habitat where they occur. The analysis of the effects contained in the EIS provides an analysis of plants, wildlife, erosion and many other topics.

25. The West Rim Project Area includes portions of 11 grazing allotments. The effects of livestock grazing on the Higgins Gulch and Tollgate allotments were analyzed under the North Zone Range 2005 EIS. The ROD for North Zone Range 05 was signed on 9/28/06. The Griffith and Pettigrew allotments are currently being analyzed under the North Zone Range 2008 EIS, with a decision expected in 2009. The remaining seven allotments were analyzed under the 1997 Livestock Grazing Environmental Assessment.

26. The Northern goshawk is a Region 2 SS and is analyzed in the DEIS (pages 99-103), and in detail in the Wildlife and Fisheries Biological Evaluation/Biological Assessment (BE/BA) (JW Associates 2008d). Impacts to both identified nest territories and suitable nesting habitat were analyzed. No treatments are proposed for any known goshawk territories.

    Analysis for emphasis species (MIS, SOLC and Sensitive) is tiered to the Forest-wide analysis for the Phase II Amendment FEIS and to the 1997 Forest Plan FEIS. As disclosed in the DEIS, the action alternatives would be consistent with the Forest Plan, including objective 211 and standards 2301 and 2305 which provide snag protection.

    The Forest Plan calls for management of structural stages to achieve objective levels Forest-wide, to meet habitat objectives for a variety of species. The contribution of each alternative toward these objectives is shown in the FEIS (page 58). In addition, each alternative meets Forest Plan standards and guidelines for management of goshawk habitat.

Habitat is a limiting factor to goshawk population due territorial nesting behavior (Reynolds and Wight. 1978).

Goshawks hunt a majority of the time in mature stands (Hargis et al, 1994) with well-closed canopies and they avoid large openings (Smith and Mannan. 1994).

Inextricably linked primary factors limiting goshawk populations are food supply and habitat (R. T. Reynolds. 1979).

The Forest Service, continuing with its less than 150 year timber cycle is continually and cumulatively limiting mature ponderosa stands and, by extension, goshawk nesting and foraging habitat.

We submit by reference the content of goshawk research conducted by (Susan Patla in 1997).

- Snail species of concern

The DEIS fails to fully analyze and assess potentially significant effects to all known snail colonies and all potential snail species of concern habitat. The DEIS fails to fully disclose the general location of all snail species of concern colonies within the West Rim timber sale area to ensure protection measures adequately protect all known and potential colonies. We, again, request that the FS implement at least a 1,500 foot buffer to adequately protect all known snail colonies. This buffer is to ensure that colonies, which are known to shift over time, are fully protected and to ensure their habitat is adequately protected. The combined effects of beetle kill and the proposed timber extraction and fuels treatments will seriously impact watershed moisture retention capacities. The DEIS does not adequately address these impacts. We request the FS utilize Biodiversity Conservation Alliance's petition to list the Black Hills mountainsnail under the Endangered Species Act for the West Rim timber sale environmental analysis and to expand its research to broaden its understanding of these impacts. BCA's petition can be found at http://www.voiceforthewild.org/bhnf/pubs/final_snail_petition.pdf. We hereby incorporate by reference this petition, its cites, and all information therein.[2]

- Sensitive woodpecker species

We are very concerned over the impacts of the West Rim timber sale to sensitive woodpecker species. Various scientific sources have clearly established the relationship between healthy woodpecker populations and wood-boring beetles and late successional habitat, which makes it difficult to believe the West Rim timber sale will not further jeopardize the viability of sensitive woodpecker species and diversity on the BHNF. The DEIS does not fully analyze and assess the potentially significant effects of the West Rim timber sale to the three-toed woodpecker, black-backed woodpecker, and Lewis's woodpecker. The DEIS does not fully analyze and assess the impacts of reducing,

[2] Petition for a Rule to list the Black Hills mountainsnail (Oreohelix cooperi) THREATENED or ENDANGERED under the Endangered Species Act 16 USC 1531 et seq. (1973 as amended) and for the designation of Critical Habitat. September 24, 2003

26. Please see response to comment 26 on previous page. The references cited have been reviewed and are consistent with the analysis in the FEIS.

27. Snail SOLC species (Callused Vertigo, Striate Dics, Mystery Vertigo and Frigid Ambersnail, FEIS pages 162-166) and SS (Coopers Mountain Snail, FEIS pages 129-133) are discussed in the DEIS and in detail in the Wildlife and Fisheries Biological Evaluation/Biological Assessment (BE/BA) (JW Associates 2008d) and Wildlife and Fisheries Resource Report (JW Associates 2008c).

    Analysis for emphasis species (MIS, SOLC and Sensitive) is tiered to the Forest-wide analysis for the Phase II Amendment FEIS (USDA Forest Service 2005a) and to the 1997 Forest Plan FEIS (USDA Forest Service 1996a). As disclosed in the DEIS, the action alternatives would be consistent with the Forest Plan.

    Surveys for emphasis snail species require a taxonomic experts to identify to the species level, therefore limited surveys for snails have been completed.

    Analysis of effect of the alternatives on the watershed, including moisture/ retention is discussed in the FEIS pages 196-224.

28. Please see response to comment 28 on following page

eliminating, or otherwise attempting to control in any way, any and all mountain pine beetle or other insect within the project to sensitive woodpecker species populations in accordance with 36 CFR § 219.19(a)(5). We request the FS allow mountain pine beetle outbreaks to occur in a large part the West Rim timber sale area to provide sensitive woodpecker habitat and to function as a natural reset of the project area's (and beyond) ecological balance, i.e., minimize interference with natural processes that have served to shape the present day ecology of the Black Hills and in particular the West Rim project area. The FS must utilize the following sources of scientific information to gain an adequate understanding of the West Rim timber sale and render an informed and environmentally considerate decision:

Anderson, S.H. and B.J. Crompton. 2002. The effects of shelterwood logging on bird community composition in the Black Hills, Wyoming. Forest Science 48(2):365-372.

Anderson, T. 2003. Conservation Assessment for the Woodpeckers in the Black Hills National Forest South Dakota and Wyoming. Prepared for the USDA Forest Service, Black Hills National Forest. April 2003.

Hall, J.S., H.J. Marriott, and J.K. Perot. 2002. Ecoregional Conservation in the Black Hills. Minneapolis, MN: The Nature Conservancy. 176 p.

Hutto, R.L. 1995. Composition of bird communities following stand-replacement fires in Northern Rocky Mountain (U.S.A.) conifer forests. Conservation Biology 9(5):1041-1058.

Imbeau, L. and A. Desrochers. 2002. Foraging ecology and use of drumming trees by three-toed woodpeckers. Journal of Wildlife Management 66(1):222-231.

Mohren, S.R. 2002. Habitat Evaluation and Density Estimates for the Black-backed Woodpecker (*Picoides arcticus*) and the Three-toed Woodpecker (*Picoides tridactylus*) in the Black Hills National Forest. M.S. Thesis, University of Wyoming, Laramie. 110 pp.

Murphy, E.C. and W.A. Lehnhausen. 1998. Density and foraging ecology of woodpeckers following a stand-replacement fire. Journal of Wildlife Management 62(4):1359-1372.

Panjabi, A. 2001. Monitoring the birds of the Black Hills: Year 1. Fort Collins, CO: Rocky Mountain Bird Observatory. 96 p.

Saab, V.A. and J.G. Dudley. 1998. Response of cavity-nesting birds to stand-replacement fire and salvage logging in ponderosa pine/Douglas fir forests of southwestern Idaho. Research Paper RMRS-RP-11. Ogden, UT:USDA Forest Service, Rocky Mountain Research Station. 17 p.

28. American three-toed woodpecker , Black-Backed Woodpeckers and Lewis's woodpecker are discussed in the FEIS (pages 89-90, 92-94, 100-104, respectively) More detailed information can be found in the Wildlife and Fisheries Biological Evaluation/Biological Assessment (BE/BA) (JW Associates 2008d) and Wildlife and Fisheries Resource Report (JW Associates 2008c).

    Analysis for emphasis species (MIS, SOLC and Sensitive) is tiered to the Forest-wide analysis for the Phase II Amendment FEIS (USDA Forest Service 2005a) and to the 1997 Forest Plan FEIS (USDA Forest Service 1996a). As disclosed in the FEIS, the action alternatives would be consistent with the Forest Plan.

    Sources recommended in the comment were reviewed, and sources were contained within FEIS analysis (e.g. Anderson 2003, Mohren 2002) are consistent with those analyses.

    Risk analyses are completed for those species that occur, or whose habitat may be impacted by the project. Red-headed woodpecker, downy woodpecker, hairy woodpecker, and red-naped sapsucker are not documented and/or no suitable habitat exists in the Project Area.

Saab, V.A. and K.T. Vierling. 2002. Reproductive success of Lewis's woodpecker in burned pine and cottonwood riparian forests. The Condor 103:491-501.

Spiering, D.J. and R.L. Knight. 2004. Wildlife use of snags in managed ponderosa pine stands, Black Hills National Forest.

Vierling, K.T. 1998. Interactions between European starling and Lewis's woodpeckers at nest cavities. Journal of Field Ornithology 69:376-379.

Vierling, K.T. 1997. Habitat selection of Lewis's woodpeckers in southeastern Colorado. Wilson Bulletin 109:121-130.

We also request the Forest Service utilize these references and any other information the agency may have in order to analyze and assess the potentially significant effects to red-headed woodpecker, downy woodpecker, hairy woodpecker, and red-naped sapsucker.

- American dipper

The American dipper is currently listed as threatened and a species of greatest conservation need in the State of South Dakota. Its continued existence on the BHNF is questionable due primarily to sedimentation problems in streams and other sources of habitat destruction. As a result, the bird has been petitioned for listing under the Endangered Species Act as a threatened or endangered distinct population segment. According to recent review of the dipper on the BHNF, there is evidence that populations of American dipper are neither viable nor well distributed. In the 2006 Bird Monitoring Report the only sighting of the bird was along Spearfish Creek. It is clear that the massive disturbances of the proposed vegetation treatments of the West Rim Project could have substantial impacts on the species. Indeed, the project could extirpate the species from the Black Hills National Forest. The FS must ensure the West Rim timber sale does not further degrade dipper habitat, both in the timber sale area and downstream of the area, and ensure the viability of the dipper is not further jeopardized. Although the FS has removed 36 C.F.R. 219.19 from its regulations, the mandates of the Multiple-Use Sustained-Yield Act still apply, as they always have, to the BHNF. Eliminating a regulation does not eliminate a duty. As the former regulation so eloquently stated, "The first priority for stewardship of the national forests and grasslands is to maintain or restore ecological sustainability to provide a sustainable flow of uses, values, products, and services from these lands." We urge the FS to pull its head out of the sand and take a hard look at the viability and sustainability of this (and all other) species.

BCA is preparing a petition to U.S. Fish and Wildlife to list the American dipper as Threatened or Endangered (*Cinclus mexicanus unicolor*) and to designate Critical Habitat under the Endangered Species Act.

28. Please see response to comment 28 on previous page

29. The American dipper is considered an SOLC species. Effects of the alternatives to this species are discussed in the FEIS (pages 139-143) and in detail in the Wildlife and Fisheries Resource Report (JW Associates 2008c) on pages 26-27, 46, 61-62, 78-80, and 88.

    Analysis for emphasis species (MIS, SOLC and Sensitive) is tiered to the Forest-wide analysis for the Phase II Amendment FEIS (USDA Forest Service 2005a) and to the 1997 Forest Plan FEIS (USDA Forest Service 1996a). As disclosed in the FEIS, the action alternatives would be consistent with the Forest Plan.

    In summary, suitable habitat would be protected in the project area through design criteria (FEIS, Appendix B).

    Monitoring of the American dipper status and species viability is addressed at the Forest level, with results found in the annual monitoring and evaluation report.

30. Thank you for your comments

We are currently compiling information, including the latest genetics data that points to the Black Hills population as having its distinct genetic identity and as a distinct and significant population segment. We incorporate by reference the entire contents of the most recent dipper genetics research which states, "In summary, these analyses suggest that the Black Hills dipper population may be genetically distinct. We are currently hoping to collect additional samples from other Rocky Mountain populations, which will be included in a more thorough analysis to determine the extent of genetic divergence of the Black Hills population from the other Rocky Mountain populations."(Anderson, C. and S. Sarver. 2008).

The preceding investigators presented an analysis of their work at a recent peer-attended summit named: Evolutionary Change in Human-altered Environments: An International Summit February 8 - 10, 2007 Institute of the Environment University of California, Los Angeles

Below is abstract of their oral presentation.

> The American Dipper is a non-migratory songbird that lives year-round near fast moving, mountain streams feeding on benthic invertebrates. Dippers are considered water quality indicator species because they require good water quality to maintain healthy populations. American Dippers were once known to occur in streams throughout the Black Hills, but now dippers number less than 50 individuals and reside in a single stream. The decline of the American Dipper in the Black Hills of South Dakota is recent (in the last decade) and is thought to be due to local stream degradation. Here were present the results of a genetic assessment of the Black Hills population of *C. mexicanus*. Eighty-nine microsatellite primer pairs developed in other passiforms were tested in dippers. Thirteen of these amplified well and were polymorphic. Samples (either blood or feathers) were collected from dippers in the Black Hills of South Dakota, the Bighorn Mountains of Wyoming and four watersheds in Idaho and Montana. Analyses were conducted to determine if there was any evidence for loss of genetic variation as a result of the reduction in population size in the Black Hills population. Population differentiation and structure were assessed for all sampled populations included in the study.

The DEIS does not adequately consider most current and best available science on the genetics, population status, conservation assessment, and management recommendations regarding (*Cinclus mexicanus unicolor*).

The FS must also utilize the following sources of scientific information to gain an adequate understanding of the West Rim timber sale and render an informed and environmentally considerate decision not limited to but especially in the context of the Black Hills American dipper population:

31. Regarding recommended sources, references were included in FEIS analysis (e.g. Backlund 2001) or found to be consistent with the analysis presented.

    Please see response to comment 29 on previous page

Backlund, D. 1989. American dippers in Spearfish Canyon. South Dakota Bird Notes 41(4):63.

Backlund, D. 1994. Nest sites of the American dipper in the Black Hills. South Dakota Bird Notes 46(1):6-9.

Backlund, D. 2001. The American dipper, (*Cinclus mexicanus*), in the Black Hills of South Dakota: past and present. South Dakota Department of Game, Fish and Parks. 16 p.

Biodiversity Conservation Alliance, et al. 2003. Petition for a Rule to list the Black Hills of South Dakota distinct population segment of American dipper (*Cinclus mexicanus*) as Threatened or Endangered under the Endangered Species Act, 16 USC § 1531 et seq. and for the designation of Critical Habitat; Petition for an Emergency Listing Rule under the Endangered Species Act 16 USC §§ 1533(b)(1)(c)(iii) and 1533(b)(7) and 50 CFR § 424.20. Submitted March 15, 2003. Petition can be found at http://www.voiceforthewild.org/bhnf/pubs/final_dipper_petition.pdf.

Feck, J.M. 2002. Assessment of the American dipper (*Cinclus mexicanus*) as a biological indicator of water quality [M.S. Thesis]. Laramie, WY: University of Wyoming. 41 p.

Hall, J.S., H.J. Marriott, and J.K. Perot. 2002. Ecoregional Conservation in the Black Hills. Minneapolis, MN: The Nature Conservancy. 176 p.

Osborn, S. A. H. 1999. Factors affecting the distribution and productivity of the American dipper (*Cinclus mexicanus*) in western Montana: Does streamside development play a role [M.S. Thesis]. Missoula, MT: University of Montana. 150 p.

Panjabi, A. 2001. Monitoring the birds of the Black Hills: Year 1. Fort Collins, CO: Rocky Mountain Bird Observatory. 96 p.

Price, F.E. and C.E. Bock. 1983. Population ecology of the dipper (*Cinclus mexicanus*) in the Front Range of Colorado. Studies in Avian Biology No. 7. Kansas: Cooper Ornithological Society.

Sorace, A., P. Formichetti, A. Boano, P. Andreani, C. Gramegna, and L. Mancini, 2002. The presence of a river bird, the dipper, in relation to water quality and biotic indices in central Italy. Environmental Pollution 118:89-96.

- Other sensitive species, threatened, endangered, and proposed species ("T/E"), and all U.S. Fish and Wildlife Service candidate and proposed species

The DEIS does not fully analyze and assess potentially significant effects to other Region 2 sensitive species, SDGF&P sensitive species, T/E species, and all candidate species and their habitat which may exist within the project area. The DEIS fails to analyze and disclose quantitative population data in order to accurately analyze and assess all potentially significant effects to sensitive, T/E, and candidate species of wildlife. We request that all sensitive, T/E, and candidate species be fully protected.

- Sharp-shinned hawk, Cooper's hawk, American kestrel

The DEIS fails to fully analyze and assess the potentially significant effects to these raptors. Recent monitoring suggests these species have declined on the BHNF, an event most likely attributable to extremely low snag densities throughout the BHNF and the lack of late successional forest habitat. The 2006 Monitoring the Birds of the Black Hills – Year 6, does not even contain an account for the sharp-shinned hawk or the American kestrel, suggesting that their viability and sustainability in the Black Hills is being compromised. Given their dependence upon snags and large diameter trees, this snag shortage is clearly affecting the ability of the FS to ensure viable and well-distributed populations of these species. Unfortunately, the FS has been unwilling to give any adequate consideration to the needs of these bird species in recent timber sale NEPA documents. We hope this will change through the DEIS for the West Rim timber sale. We request the FS ensure the West Rim timber sale does not lead to further population declines for these species in order to ensure diversity is provided for on the BHNF. The FS must utilize the following sources of scientific information to gain an adequate understanding of the West Rim timber sale and render an informed and environmentally considerate decision:

Panjabi, A. 2001. Monitoring the birds of the Black Hills: Year 1. Fort Collins, CO: Rocky Mountain Bird Observatory.

Panjabi, A. 2003. Monitoring the birds of the Black Hills: Year 2. Fort Collins, CO: Rocky Mountain Bird Observatory.

Saab, V.A. and J.G. Dudley. 1998. Response of cavity-nesting birds to stand-replacement fire and salvage logging in ponderosa pine/Douglas fir forests of southwestern Idaho. Research Paper RMRS-RP-11. Ogden, UT:USDA Forest Service, Rocky Mountain Research Station. 17 p.

- Black Hills red-backed vole

An DEIS fails to fully analyze and assess the potentially significant effects of the West Rim timber sale to this endemic mammal subspecies. And, while the FS claims that this species is widespread and abundant on the BHNF, the agency has yet to come forward with any supporting information or analysis. Therefore, to ensure this species, which is most likely an important prey species for many forest predators (e.g., goshawk, Cooper's hawk, marten), is fully protected and to ensure the scientific and professional integrity of the FS, the agency must address impacts to this mammal and fully protect the species and

8

32. Quantitative data was provided when available for all SS which have suitable habitat in the Project Area. No list was found for SDGF sensitive species. No T/E listed or candidate species were found to occur in the Project Area.

33. Coopers Hawk is an SOLC species and impacts of the project are discussed in the FEIS pages 144-146. The Sharp Shinned hawk is also a SOLC and is discussed in the FEIS (pages 153-154). Both species are discussed in detail in the Wildlife and Fisheries Resource Report (JW Associates 2008c). Risk analyses are completed for those emphasis species that occur, or whose habitat may be impacted by the project. The American Kestrel is not classified as an emphasis species and is not included in this analysis.

    Monitoring of emphasis species status and species viability and sustainability are assessed on the BHNF at the Forest level rather than the project level, with results found in the annual monitoring and evaluation report

    As disclosed in the FEIS, the action alternatives would be consistent with Forest Plan, including Forest Standards for snags. Known and suspected nests would be protected from disturbance and unacceptable habitat alternation; Appendix B of the FEIS, identifies specific design criteria to meet

    Forest Plan Standard 3204, which directs projects to consider recommendations from other federal and state agencies when designing management near known raptor nests.

    Panjabi 2001 and 2003 referenced in the comment were included in the FEIS analysis and are cited in the background sections of these species.

    The Saab and Dudley reference does not discuss the Sharp-shinned hawk or Cooper's hawk in detail.

34. See response to comment 34 on following page

its habitat. The FS must utilize the following sources of scientific information to gain an adequate understanding of the West Rim timber sale and render an informed and environmentally considerate decision:

Beauvais, G.P. 1997. Mammals in fragmented forests in the Rocky Mountains: community structure, habitat selection, and individual fitness [Ph.D. dissertation]. Laramie, WY, University of Wyoming

Hall, J.S., H.J. Marriott, and J.K. Perot. 2002. Ecoregional Conservation in the Black Hills. Minneapolis, MN: The Nature Conservancy. 176 p.

Nordyke, K.A. and S.W. Buskirk. 1991. Southern red-backed vole, *Clethrionomys gapperi*, populations in relation to stand succession and old-growth character in the central Rocky Mountains. The Canadian Field Naturalist 105:330-334.

Pearson, D.E. 1994. Habitat use by the southern red-backed vole (*Clethrionomys gapperi*): response of an old-growth associated species to succession [M.S. Thesis]. Missoula, MT University of Montana.

- Northern flying squirrel

The DEIS must fully analyze and assess the potentially significant effects to the Northern flying squirrel. This analysis must fully analyze and assess the potentially significant effects to ectomycorrhizal fungi that supports Northern flying squirrels in other forests and is undoubtedly a part of the flying squirrel's diet on the BHNF. The FS must utilize the following sources of scientific information to gain an adequate understanding of the West Rim timber sale and render an informed and environmentally considerate decision:

Bakker, V.J. and K. Hastings. 2002. Den trees used by Northern flying squirrels (*Glaucomys sabrinus*) in southeastern Alaska. Canadian Journal of Zoology 80:1623-1631.

Carey, A.B. 2002. Response of Northern flying squirrels to supplementary dens. Wildlife Society Bulletin 30(2):547-556.

Carey, A.B. 2000. Effects of new forest management strategies on squirrel populations. Ecological Applications 10(1):248.

Carey, A.B. 1999. Ecology of Northern flying squirrels: implications for ecosystem management in the Pacific Northwest, USA. In R. Goldingay and J. Scheibe, eds. Gliding mammals. Filander Press, Furth, Germany.

Hall, D. 1991. Diet of the Northern flying squirrel at Sagehen Creek, California. Journal of Mammalogy 72(3):615-617.

9

34. Risk analyses are completed for those emphasis species that occur, or whose habitat may be impacted by the project. The red-backed vole is not classified as an emphasis species and is not included in this analysis.

35. The Northern Flying Squirrel is assessed in the FEIS (pages 159-161) and in detail in the Wildlife and Fisheries Resource Report (JW Associates 2008c). The references cited have been reviewed and are consistent with the analysis in the FEIS.

Hall, J.S., H.J. Marriott, and J.K. Perot. 2002. Ecoregional Conservation in the Black Hills. Minneapolis, MN: The Nature Conservancy. 176 p.

Hayward, G.D. and R. Rosentreter. 1994. Lichens as nesting material for Northern flying squirrels in the Northernn Rocky Mountains. Journal of Mammalogy 75(3):663-673.

Reunanen, P., M. Mönkkönen, and A. Nikula. 2000. Managing boreal forest landscapes for flying squirrels. Conservation Biology 14(1):218-226.

Rosentreter, R., G.D. Hayward, and M. Wicklow-Howard. 1997. Northern flying squirrel seasonal food habits in the interior conifer forests of Central Idaho, USA. Northwest Science 72(2):97-102.

- Flammulated owl

The DEIS inadequately analyzes and assesses the potentially significant effects to flammulated owl and its habitat. The flammulated owl was confirmed to exist during recent monitoring on the Black Hills. See, e.g., 2002 Monitoring the Birds of the Black Hills: Year 2. This is the last account of the bird in the Black Hills monitoring project. It is distressing to note that not a single owl species was observed in the 2006 Monitoring report. Given the species' rare status throughout its range, its dependence upon old growth ponderosa pine, and the fact that this species' existence has only recently been confirmed on the BHNF, there is significant concern over the impacts of forest management activities to this species and its habitat, which consists of old growth ponderosa pine. Special attention must be given to the owl (and all owl species in the Black Hills) to ensure its habitat is adequately protected and that the owl and its habitat do not suffer adverse impacts as a result of the West Rim timber sale. The FS must utilize the following sources of scientific information to gain an adequate understanding of the West Rim timber sale and render an informed and environmentally considerate decision:

Linkhart, B. D., R. T. Reynolds, R. A. Ryder. 1998. Home range and habitat of breeding flammulated owls in Colorado. Wilson Bulletin 110(3): 342 –351.

Linkhart, B.D. and R.T. Reynolds. 1997. Territories of flammulated owls: is occupancy a measure of habitat quality? pp. 226-230 in Biology and conservation of owls in the Northern hemisphere (J.R. Duncan, D.H. Johnson, and T.H. Nichols, Eds.). USDA Forest Service General Technical Report NC-190.

Reynolds, R. T. and B. D. Linkhart. 1992. Flammulated owls in ponderosa pine: Evidence of preference for old growth. Old-Growth Forests in the Southwest and Rocky Mountain Regions, Proceedings of a Workshop. USDA Forest Service General Technical Report RM-213.

36. The flammulated owl is analyzed in the FEIS (pages 96-100) and in detail in the Wildlife and Fisheries Biological Evaluation/Biological Assessment (BE/BA) (JW Associates 2008d). Only two observations of the species have been recorded in the past 10 years (FEIS page 96). The references cited have been reviewed and are consistent with the analysis in the FEIS.

Reynolds, R.T. and B.D. Linkhart. 1987. The nesting biology of flammulated owls in Colorado. Paper presented at the Symposium on the Biology and Conservation of Northern Forest Owls. Winnipeg, Manitoba, Canada February 3-7, 1987.

Reynolds, R.T. and B. D. Linkhart. 1987. Fidelity to territory and mate in flammulated owls. Paper presented at the Symposium on the Biology and Conservation of Northern Forest Owls. Winnipeg, Manitoba, Canada February 3-7, 1987.

Additionally, we request the Forest Service analyze and assess the potentially significant effects of the West Rim timber sale to the Northern saw-whet owl, another old growth and snag obligate that is known to exist on the BHNF.

37. Analysis of the Northern Saw-whet owl is contained within the FEIS (pages 147-149) and the Wildlife and Fisheries Resource Report (JW Associates 2008c).

- Black bear

The DEIS fails to fully analyze and assess the potentially significant effects to the black bear and its habitat. The Forest Service has failed to provide any analysis or information supporting their claim that the black bear no longer exists on the BHNF. There is a possibility that black bear continue to exist on the BHNF as there has been confirmed sightings of the bear in the BHNF. We request the Forest Service fully consult with the South Dakota Department of Game, Fish, and Parks, the South Dakota Natural Heritage Program, the Wyoming Game and Fish, and the Wyoming Natural Diversity Database to determine if there have been black bear sightings on the BHNF and therefore a possibility that this species still exists. Regardless of sightings though, the agency must fully consider the possibility that the black bear will naturally disperse from other areas to the BHNF and therefore reestablish itself. In the meantime, the FS must protect any and all existing black bear habitat to ensure this species can restore itself to the Forest. The black bear is listed as a threatened species by the South Dakota Game, Fish and Parks Department. The FS must utilize the following sources of scientific information to gain an adequate understanding of the West Rim timber sale and render an informed and environmentally considerate decision:

38. Risk analyses are completed for those emphasis species that occur, or whose habitat may be impacted by the project. Black Bear is not included on this list.

Mollohan, C.M. and A.L. LeCount. 1989. Problems of maintaining a viable black bear population in a fragmented forest. Paper presented at the Conference on Multiresource Management of Ponderosa Pine Forests, Northern Arizona University, November 14-16, 1989.

- Atlantis fritillary butterfly (*Speyeria atlantis pahasapa*)

We request the FS fully analyze and assess the impacts of the West Rim timber sale to this endemic butterfly subspecies and fully protect any sites where the subspecies exists and fully protect the species' habitat. While the FS has yet to analyze and assess the impacts of a timber sale to this species, we hope this will change. **We also remind the agency that, regardless of whether or not a species is threatened, endangered, sensitive, or a management indicator species, the agency has a duty under NEPA to**

39. Analysis of the Atlantis Fritillary is contained within the FEIS (pages 161-163) and in detail within the Wildlife and Fisheries Resource Report (JW Associates 2008c). The references cited have been reviewed and are consistent with the analysis in the FEIS.

consider the impacts of its actions to the human environment and to address public concerns expressed during the NEPA comment process. Additionally, the failure to consider impacts to this subspecies is a sure sign that Endangered Species Act protection may be necessary to prevent the extinction of this rare butterfly. The following sources of information should be referenced to ensure this species and its habitat are not adversely impacted:

Hall, J.S., H.J. Marriott, and J.K. Perot. 2002. Ecoregional Conservation in the Black Hills. Minneapolis, MN: The Nature Conservancy. 176 p.

Scott, J. A., N. Kondla, and S. Spomer. 1998. Speyeria Hesperis and Speyeria Atlantis are Distinct Species. Papilio No. 8. February 20, 1998.

- Fringe-tailed myotis, silver-haired bat, Townsend's big-eared bat, other native bat species

The DEIS fails to analyze and assess the potentially significant effects to these native bat species and their habitat. The Forest Service must also consider the fact that snags, large diameter trees, late successional forest, wetlands, streams, ponds, and other open bodies of water also provide habitat for native bat species. Recent studies of bat species have shown a preference for old growth stands, which typically contain abundant snags. The FS must utilize the following sources of scientific information to gain an adequate understanding of the West Rim timber sale and render an informed and environmentally considerate decision:

Dowd Stukel, E. 2001. South Dakota's tree bats. South Dakota Conservation Digest 68(1):22-23.

Hall, J.S., H.J. Marriott, and J.K. Perot. 2002. Ecoregional Conservation in the Black Hills. Minneapolis, MN: The Nature Conservancy. 176 p.

Mattson, T.A., S.W. Buskirk, and N.L. Stanton. 1996. Roost sites of the silver-haired bat (*Lasionycteris noctivagans*) in the Black Hills, South Dakota. Great Basin Naturalist 56(3):247-253.

Schmidt, C.A. 2002. Conservation Assessment for the Fringed Bat. Prepared for the USDA Forest Service, Black Hills National Forest, Custer, SD.

- Native Fish Species

The DEIS fails to analyze and assess the potentially significant effects to native fish species. Numerous concerns have been expressed over native fish viability on the BHNF (see e.g., Chief's 1999 Appeal Decision for Appeals of the 1997 BHNF Revised Forest Plan) and therefore, the agency is obligated to ensure the West Rim timber sale does not adversely affect these fish species. Survey data will also enable the FS to better analyze and assess the impacts of the West Rim timber sale to native fish species. We request

12

40. Native bat species including the sensitive species (fringed myotis and Townsend's big-eared bat pages 115-119 FEIS) and SOLC bats (Long-eared Myotis, Long-legged myotis, small-footed myotis and Small-footed myotis, pages 150-153) and are analyzed in the FEIS and in the Wildlife and Fisheries Biological Evaluation/Biological Assessment (BE/BA) (JW Associates 2008d) and Wildlife and Fisheries Resource Report (JW Associates 2008c). The references cited have been reviewed and are consistent with the analysis in the FEIS.

41. Based on Isaak 2003, Finscale Dace and Lack Chub (Region 2 SS) are not present in the Project Area. Mountain Sucker (SS, MIS), which has been observed in the Project Area, is fully analyzed in the FEIS (pages 127-128) as well as in the Wildlife and Fisheries Biological Evaluation/Biological Assessment (BE/BA) (JW Associates 2008d) and Wildlife and Fisheries Resource Report (JW Associates 2008c).

Regarding recommended sources: Isaak (2003) is referenced in the FEIS. Hall, et al. was examined and found to be consistent with the FEIS analysis. Erickson (2002) is an unpublished draft document and was not available.

that all native fish species be fully protected. The FS must utilize the following sources of scientific information to gain an adequate understanding of the West Rim timber sale and render an informed and environmentally considerate decision:

Erickson, J.W. 2002. Current status of the mountain sucker in the Black Hills of South Dakota. South Dakota Department of Game, Fish, and Parks, Draft Planning Document. 5 p.

Hall, J.S., H.J. Marriott, and J.K. Perot. 2002. Ecoregional Conservation in the Black Hills. Minneapolis, MN: The Nature Conservancy. 176 p.

Isaak, D.J., W.A. Hubert, and C.R. Berry. 2003. Conservation assessment of the lake chub (*Couesius plumbeus*), mountain sucker (*Catostomus platyrhynchus*),and finescale dace (*Phoxinus neogaeus*) in the Black Hills of South Dakota and Wyoming. Report for the Black Hills National Forest. 102 p.

- Management Indicator Species

The DEIS inadequately analyzes and assesses the potentially significant effects to all MIS and their habitat that may exist within the West Rim timber sale area. The DEIS must include and present quantitative MIS population trend data in order to accurately analyze and assess all potentially significant effects to MIS populations. Special attention must be given to the brown creeper as this bird species is an indicator of dense mature and late successional forest, a habitat type that has declined precipitously on the BHNF and now exists in very isolated and sparse stands on the forest. The FS must utilize the following sources of scientific information to gain an adequate understanding of the West Rim timber sale and render an informed and environmentally considerate decision:

Anderson, S.H. and B.J. Crompton. 2002. The effects of shelterwood logging on bird community composition in the Black Hills, Wyoming. Forest Science 48(2):365-372.

Crompton, B.J. 1994. Songbird and small mammal diversity in relation to timber management practices in the Northwestern Black Hills [M.S. Thesis]. Laramie, WY: University of Wyoming.

Dowd Stukel, E. 1999. Brown Creeper. South Dakota Conservation Digest 66(5):26-27.

Panjabi, A. 2001. Monitoring the birds of the Black Hills: Year 1. Fort Collins, CO: Rocky Mountain Bird Observatory. 96 p.

42. MIS species were analyzed using best available data. MIS species are discussed in the FEIS and in further detail in the Wildlife and Fisheries Resource Report (JW Associates 2008c).

    The brown creeper and its preferred habitat is analyzed in the FEIS (pages 94-95) and in the Wildlife and Fisheries Resource Report (JW Associates 2008c). The references cited have been reviewed and are consistent with the analysis in the FEIS.

Rumble, M.A., B.L. Dykstra, and L.D. Flake. 2000. Species-area relations of song birds in the Black Hills, South Dakota. Intermountain Journal of Science 6(1):33-48.

The ruffed grouse is a management indicator species for the BHNF and if it exists in the proposed project area, we specifically request that it be used for analysis of the West Rim timber sale. The ruffed grouse is dependent upon high quality aspen habitat and, as an MIS, can help the FS better understand the impacts of the West Rim timber sale to native species dependent on aspen.

- Sensitive plant species and plant species of concern

The DEIS does not fully analyze and assess the potentially significant effects to the following plant species of concern and their habitats:

Autumn coral-root (*Corallorrhiza odontorhiza*),
Autumn willow (*Salix serissima*),
Blunt-broom sedge (*Carex tribuloides*),
Dwarf scouring rush (*Equisetum scirpoides*),
Foxtail sedge (*Carex alopecoidea*),
Giant Helleborine (*Epipactis gigantean*),
Great-spurred violet (*Viola selkirkii*),
Large roundleaf orchid (*Platanthera orbiculata*),
Prairie dunewort (*Botrychium campestre*),
Southern maidenhair-fern (*Adiantum capillus-veneris*),
Spinulose shield fern (*Dryopteris carthusiana*),
Trailing clubmoss (*Lycopodium complanatum*),
Moschatel (*Adoxa moschatellina*),
Maindenhair spleenwort (*Asplenium trichomanes*),
Green spleenwort (*Asplenium viride*),
Elegant sedge (*Carex bella*),
Bristly-stalk sedge (*Carex leptalea*),
Longstalk sedge (*Carex pedunculata*),
Dog cryptantha (*Cryptantha cana*),
American rock-brake (*Cryptogramma acrostichoides*),
Large yellow ladies-slipper (*Cypripedium calceolus var. pubescens*),
Beaked spikerush (*Eleocharis rostellata*),
Woodland horsetail (*Equisetum sylvaticum*),
Variegated horsetail (*Equisetum variegatum*),
Showy prairie gentian (*Eustoma russellianum*),
Secund Bladderpod (*Lesquerella arenosa var. argillosa*),
Broad-leaved Twayblade (*Listeria convallarioides*),
Stiff clubmoss (*Lycopodium annotinum*),
Treelike clubmoss (*Lycopodium dendroideum*),
Marsh muhly (*Muhlenbergia glomerata*),
Gray's lousewort (*Pedicularis procera*),

43. Analysis of the Ruffed grouse and the relation to aspen habitat is within the FEIS at pages 107-108 and in detail in the Wildlife and Fisheries Biological Evaluation/Biological Assessment (BE/BA) (JW Associates 2008d) on pages 19-20,4 58-59, and 86.

44. Section 3.6.2 of the FEIS summarizes the assessment of the potential effects of the alternatives on R2 sensitive plant species and plant species of local concern. Additional information may be found in the Botany Biological Evaluation (BE) (JW Associates 2008h) and the Botany Resource Report (JW Associates 2008e).

Arrow-leaved sweet-coltsfoot (*Petasites sagittatus*),
Mountain holly-fern (*Polystichum lonchitis*),
Hoary willow (*Salix candida*),
Bloodroot (*Sanguinaria canadensis*),
Woolrush (*Scirpus atrocinctus*), and
Thinleaved blueberry (*Vacinium membranaceum*).

We also are concerned that the DEIS fails to present information and maps showing the occurrence of high quality and non-high quality plant habitat, as well as documentation of the results of plant surveys conducted in these habitats. We also request the FS fully analyze and assess the impacts to unique vegetation communities within the West Rim timber sale area. The FS must also fully protect all unique vegetation communities and sensitive and/or rare plants in the West Rim timber sale area. The FS must utilize the following sources of scientific information to gain an adequate understanding of the West Rim timber sale and render an informed and environmentally considerate decision:

Fertig, W. 1993. Black Hills National Forest Sensitive Plant Field Guide. Report prepared for the Black Hills National Forest by the Wyoming Natural Diversity Database, Laramie, WY.

Hall, J.S., H.J. Marriott, and J.K. Perot. 2002. Ecoregional Conservation in the Black Hills. Minneapolis, MN: The Nature Conservancy. 176 p.

- Snags, Down-woody debris

Mountain pine beetle infestations, if left alone, lead to the creation of snags and consequently the existence of down-woody debris. These habitat components are essential to the survival of many native species on the BHNF. The DEIS fails to fully analyze and assess how the West Rim timber sale will affect snag habitat and down-woody debris habitat, as well as snag recruitment and the creation of future down-woody debris. Such an analysis and assessment must consider the fact that certain native species depend upon large-diameter snags and large diameter down-woody debris.

- Water quality

The DEIS does not fully analyze and assess the potentially significant effects to water quality both within the West Rim timber sale area and downstream from the timber sale area to ensure compliance with the Clean Water Act, State of South Dakota Quality laws, and Executive Orders 11988 and 11990. The DEIS fails to fully analyze the effects of the West Rim timber sale on sedimentation, flow regimes, water temperature alterations, and streambeds and banks. When analyzing the effects of the West Rim timber sale to water resources, the FS cannot simply rely on a list of best management practices ("BMP's") in place of analysis, disclosure, and assessment as required by the National Environmental Policy Act. For instance, if sedimentation will occur as a result of the timber sale, the agency must analyze and disclose how much sedimentation will occur in order to adequately assess the significance of any and all sedimentation. A mere listing

45. Section 3.6.1 of the DEIS contains a map that displays plant habitat suitable for R2 sensitive plant species and plant species of local concern found within the West Rim project area (Figure 9) additional maps may be found in the Botany Resource Report (JW Associates 2008e) and the West Rim Botany Biological Evaluation (BE) (JW Associates 2008h). Table 31 in the FEIS summarizes the results of the plant surveys conducted in the Project Area to date. The unsurveyed area is currently under contract to be surveyed. Project design criteria include avoiding habitat suitable for these rare plants and protection of known occurrences of rare plants in the project area. Species specific conservation assessments were consulted and referenced within the Botany Biological Evaluation (BE) (JW Associates 2008h) and Botany Resource Report (JW Associates 2008e). The references cited have been reviewed and are consistent with the analysis in the FEIS.

46. Snag habitat and down-woody debris are discussed in context to specific species requirements and in the silviculture section of the FEIS.

The West-Rim project is consistent with the Forest Plan, including Standards 2305 (all soft snags except those deemed safety hazards would be maintained) and 301 (large snags to be maintained except when a safety hazard.

Hardwood snags to be maintained at a density of at least 6/ acre. These standards are incorporated into Project Area Design Criteria retain snags and downed woody debris (FEIS Appendix B)

47. See response to comment 47 on following page

of BMP's is a wholly inadequate assessment and does not provide the public or the agency with any kind of understanding of the potentially significant effects of the West Rim timber sale to water resources. Additionally, any analysis and assessment must fully consider the cumulative effects of BMP implementation. This is because BMPs do not eliminate water quality impacts, but rather "minimize" them. Therefore, there are adverse impacts associated with BMP implementation and the FS must consider the fact that cumulatively, BMP implementation has led to potentially significant impacts to water quality. Finally, there are indications that BMP implementation does not adequately protect water quality and aquatic resources. The following sources suggest that BMPs are inadequate to protect water quality and aquatic resources:

Cederholm, C.J., L.M. Reid, and E.O. Salo. 1981. Cumulative effects of logging road sediment on salmonid populations in the Clearwater River, Washington: a project summary. Pags 373-398 in Salo and Cundy eds. Streamside management: forestry and fishery interactions.

Espinosa, F.A., Rhodes, J.J. and McCullough, D.A. 1997. The failure of existing plans to protect salmon habitat on the Clearwater National Forest in Idaho. J. Env. Management 49(2):205-230.

Rhodes, J.J., Espinosa, F.A., and Huntington, C., in process. Watershed and Aquatic Habitat Response to the 95-96 Storm and Flood in the Tucannon Basin, Washington and the Lochsa Basin, Idaho. Final Report to Bonneville Power Administration, Portland, Or.

Stanford, J.A., and Ward, J.V., 1992. Management of aquatic resources in large catchments: Recognizing interactions between ecosystem connectivity and environmental disturbance. Watershed Management: Balancing Sustainability and Environmental Change, pp. 91-124, Springer Verlag, New York.

Waters, T.F. 1995. Sediment in streams. American Fisheries Society Monograph 7. American Fisheries Society, Bethesda, MD.

Ziemer, R.R., and Lisle, T.E., 1993. Evaluating sediment production by activities related to forest uses--A Northwest Perspective. Proceedings: Technical Workshop on Sediments, Feb., 1992, Corvallis, Oregon. pp. 71-74.

- Riparian areas

The DEIS does not fully disclose the existence, extent, and vegetative composition of all riparian areas within the West Rim timber sale and fully analyze and assess the potentially significant effects to these riparian areas. Please disclose the existence of all riparian areas on maps included with the West Rim timber sale analysis and provide information documenting the vegetative composition of riparian areas in the timber sale area.

16

47. The analysis of sedimentation, flow regimes, water temperature and stream beds and banks does not rely solely on BMPs (pages 202-211). However, design criteria and BMPs are key components of this project. They have been proven effective in the Black Hills ecosystem. There is a section on BMP effectiveness on page 55 of the Hydrology and Soils Resource Report for the West Rim Project (JW Associates 2008f). The references provided in the comment are from much different ecosystems such as the Pacific Northwest. The BMP effectiveness evaluation was completed on the Black Hills National Forest and concludes that BMP are very effective. The references cited have been reviewed and are consistent with the analysis in the FEIS.

48. Riparian areas that are classified as wetlands are listed in a table on page 20 of the Hydrology and Soils Resource Report for the West Rim Project (JW Associates 2008f). Riparian ecosystems are analyzed on page 222 of the FEIS.

49. This comment is on the following page.

Section 1.5 of the FEIS contains the Forest Plan goals and objectives used to guide the development of the proposed actions and alternatives. Goal 2 is to "Provide for a variety of life through management of biologically diverse ecosystems". To meet this goal the Forest has an objective of managing for 3,600 acres of meadow. Currently there are 748 acres of meadow within the West Rim Project Area (see section 1.5.1 FEIS). These meadows make up less than 2 percent of the National Forest System lands within the West Rim Project area (section 3.3.1 of FEIS). Under alternatives B and C conifers would be removed from 37 acres of meadow (section 2.2.2 of FEIS).

- Meadows

The DEIS does not fully disclose the location and extent of all historic meadows in the West Rim timber sale area so that reviewers of any environmental analysis can fully understand the extent of pine encroachment. Furthermore, such a disclosure is necessary to support any assertion that pines must be removed from meadows. The DEIS fails to disclose the acres desired to be meadows in the project area to compare with the acreage of meadows that may be created by the West Rim timber sale. This disclosure is necessary so that reviewers of any environmental analysis can fully understand the extent of the potentially significant effects of the timber sale.

- Late successional habitat

The DEIS does not fully analyze and assess the potentially significant effects to late successional forest habitat, including the effects upon all potential late successional habitat (i.e., the effects of the West Rim timber sale to late successional recruitment). This analysis must also differentiate between tree species. To complete this analysis and assessment, the Forest Service must first analyze whether or not the amount of late successional forest in the project area is sufficient to meet the needs of populations of wildlife species dependent on late successional forest. The Forest Service must then analyze the effects of the West Rim timber sale to late successional habitat (including future late successional habitat) in terms of the needs of those species of wild life dependent on this specialized habitat (e.g., Northern goshawk, marten, sensitive woodpecker species, pygmy nuthatch, Northern flying squirrel, golden-crowned kinglet, and brown creeper). **We request that all late successional habitat and all potential late successional habitat be protected.** We request the FS reference the following report to aid in its analysis of the effects of the West Rim timber sale to late successional habitat:

Anderson, S.H. and B.J. Crompton. 2002. The effects of shelterwood logging on bird community composition in the Black Hills, Wyoming. Forest Science 48(2):365-372.

Baker, W. L., and D. Ehle. 2001. Uncertainty in surface-fire history: the case of ponderosa pine forests in the western United States. Can. J. For. Res. 31: 1205-1226.

Shinneman, D.J. 1996. An analysis of range of natural variability, roads, and timber harvesting in a Black Hills ponderosa pine forest landscape. M.A. Thesis, University of Wyoming, Laramie. 99 p.

Shinneman, D.J. and W.L. Baker. 1997. Nonequilibrium dynamics between catastrophic disturbances and old-growth forests in ponderosa pine landscapes of the Black Hills. Conservation Biology 11:1276-1288.

- Fragmentation, connectivity

17

49. See response to comment 49 on previous page

50. See sections 1.5.2, 3.3.1, and 3.3.2 of the FEIS for an analysis of forest structural stages including an assessment of late successional ponderosa pine forest. The Forest Plan sets goals for the distribution of successional stages for some Management Areas including Management Areas 4.1, 5.1, 5.4, and 5.6. Forested areas within these areas can be changed through timber harvest. There are no structural stage distribution objectives for MA 4.2a (Spearfish Canyon). The forested areas within Spearfish Canyon are not managed for timber production but for biological and scenic values. The action alternatives do not include any commercial harvest of forest stands within Spearfish Canyon. Forest structural stages within the canyon will not be altered as a result of the proposed treatments.

    The analysis of forest structural stages in the FEIS looks only at ponderosa pine forests and does not include spruce forest stands. No spruce stands would be harvested under the proposed alternatives and the successional stages of this forest type would not be altered.

    Currently there is a lack of late successional forest within the West Rim Project Area as well as forest wide (see Silviculture Resource Report). This lack of late successional forest is a result of the intensive logging that occurred a century ago. However, the area is composed of predominately mature forest stands (structural stage 4) and over time a portion of these stands will develop into late successional habitat. The analysis of forest structural stages in section 3.3.2 shows that under action Alternatives B and C, mature pine stands (structural stage 4) will still predominate following treatment. This shows that there will be a large amount of potential "late successional recruitment" remaining in the area following treatment.

    While most of the existing late successional forest within the project area would be retained, 56 acres of late successional ponderosa pine would be set back to an earlier successional stage as a result of harvesting under alternatives B and C.

We request the FS fully analyze and assess the direct, indirect, and cumulative impacts of the West Rim timber sale to fragmentation in the timber sale area and the BHNF as a whole. We request the FS fully disclose how the timber sale will affect connectivity between mature or late successional stands and how past timber harvesting has **cumulatively** affected connectivity. Such an analysis and assessment must pay attention to the impact of road-related fragmentation, edge effect, and patch size. The following sources provide invaluable information that will enable the FS to complete an adequate analysis and assessment:

Baker, W.L. and G.K. Dillon. 2000. Plant and Vegetation Responses to Edges in the Southern Rocky Mountains. Pages 221-245 in Knight, R.L, F.W. Smith, S.W. Buskirk, W.H. Romme, and W.L. Baker, eds., Forest Fragmentation in the Southern Rocky Mountains. University Press of Colorado, Boulder.

Murcia, C. 1995. Edge effects in fragmented forests: implications for conservation. Trends in Ecology and Evolution 10:58-62.

Shinneman, D.J. 1996. An analysis of range of natural variability, roads, and timber harvesting in a Black Hills ponderosa pine forest landscape. M.A. Thesis, University of Wyoming, Laramie. 99 p.

Shinneman, D.J. and W.L. Baker. 1997. Nonequilibrium dynamics between catastrophic disturbances and old-growth forests in ponderosa pine landscapes of the Black Hills. Conservation Biology 11:1276-1288.

Shinneman, D.J. and W.L. Baker. 2000. Impact of Logging and Roads on a Black Hills Ponderosa Pine Forest Landscape. Pages 311-335 in Knight, R.L, F.W. Smith, S.W. Buskirk, W.H. Romme, and W.L. Baker, eds., Forest Fragmentation in the Southern Rocky Mountains. University Press of Colorado, Boulder.

51. Fragmentation relevance and effects vary by species and their respective habitat needs and mobility. Large tracts of unlogged, mature forest may represent less fragmented conditions for some species, while representing less diversity for others (e.g., grassland species). Abundance and distribution of habitat is discussed for the individual wildlife species for which fragmentation is a concern in Phase II FEIS Chapter 3, Section 3-3. Also refer to the 1997 FEIS for the Revised Forest Plan, pages III-247 through III-275, for a discussion and evaluation of fragmentation. The references cited have been reviewed and are consistent with the analysis in the FEIS.

- Roads, routes, ways, etc.

We remain gravely concerned that the proposed project includes construction of 35 miles of new roads, as well as reconstruction of 126 miles of existing roads. Opening of 35 miles of new roads flies in the face of the current Travel Management Planning (TMP) process for motorized use on the Forest. The BHNF must be aware of the fact that every new road created will be utilized by off-highway vehicles (OHV), whether or not the BHNF formally closes the roads in the future. Thus, new roads will offer that many more opportunities for unmonitored recreation and creation of new and illegal user routes on the Forest. The DEIS does not fully analyze and disclose the impacts this project will have on the TMP process, as well as all other types of impacts from new and reconstructed roads.

52. New routes created under West Rim will be considered in the Forest-wide Travel Management decision. The effects of any new routes will be analyzed as part of the Travel Management Planning process. For the sake of analysis, it is assumed that rules set forth under the Travel Management Plan, whether they open or close an area to motorized travel, will be adhered to.

The DEIS does not fully disclose the existence of all roads, ways, two-tracks, illegally created routes, off-road vehicle routes, ATV trails, and any other pathway that facilitates the transportation and movement of motorized vehicles. This is necessary so that the FS can adequately analyze and assess the impacts of any and all proposed travel management plan to the environment, especially the impacts of road construction/reconstruction, road openings, and adoption of user-created routes as Forest System Roads. The FS must also give attention to the cumulative impacts of off-road vehicle use and the illegal creation of vehicle routes in the timber sale area. If the FS only analyzes classified roads and ignores existing and possibly illegally created off-road vehicle routes or other non-classified routes, ways, etc., then the agency cannot possibly assess the effects of travel management. This disclosure is also necessary so that the public can fully understand the existence of vehicle routes within the West Rim timber sale area and understand the effects of leaving open, closing, decommissioning, constructing, or reconstructing routes within the area. We also point out that the FS must adhere to the 2001 road rule in determining an appropriate transportation system in the West Rim timber sale area.

Additionally, in analyzing and assessing the impacts of roads, we request the agency clearly address the following concerns:

- How will roads be "closed"?
- Will "closed" roads remain open to administrative and periodic public use?
- What is the effectiveness of the proposed methods of road closure?
- What is the most effective form of road closure?
- Will the agency have **funding and staff** to effectively and adequately enforce road closures?
- What level of funding and staff are necessary to enforce road closures?
- What level of funding and staff does the FS currently have committed to enforce road closures?
- If gates are used, what is the effectiveness in using gates to prevent use of roads?
- What does "decommissioning" mean?
- Will the FS undertake road obliteration and revegetation?
- If not, why not?
- Will user-created routes continue to be created in the timber sale area?
- What are the impacts associated with user-created routes?
- Is off-road vehicle use a problem in the area?
- What are the impacts associated with off-road vehicle use?

- Fuels Reduction treatments

We request the FS provide information and analysis supporting the effectiveness and the reasonableness of the proposed fuels reduction treatments. We also request the FS fully address the fact that many of the large fires that have burned on the BHNF in the last few years have burned in areas that had been logged and thinned. The West Rim Project Area has recently been logged on at least nine occasions. There does not appear to be

19

52. See response to comment 52 on previous page

53. Research on the effects of forest management activities on fire behavior has shown that reducing canopy bulk density and the creation of openings reduces fuels available to carry crown fires (Graham et al. 2004 and FEIS page 73).

Harvesting in the Black Hills has been ongoing since the 1870s, as noted in the FEIS. Consequently nearly all the BHNF has experienced some form of harvesting. In some areas it is possible that more then one harvest may have occurred over the same landscape. Large wildfires have historically been occurring on the forest during the 20th century.

Very few fire starts become large fires. Most fires are extinguished at less than one acre. This could be attributable to availability of suppression resources and quick response times, but it's also conceivable that past harvest and thinning activities play a role in that. Once a fire does get large, there's very little that will stop it.

The references cited have been reviewed and are consistent with the analysis in the FEIS.

any relationship between silviculture treatments and potential fire behavior. We therefore request that the proposed vegetation treatments not occur.

The following sources provide invaluable information that will enable the FS to complete an adequate analysis and assessment:

> Carlson, J. (2008). Potential Risks and Impacts to Soil and Water Resources from Mountain Pine Beetle Mortality, Treatments and Wildfire in Colorado and Wyoming National Forests. USDA Forest Service. Rocky Mountain Regional Office. Mary H. Peterson, Lead Forest Supervisor. Bark Beetle Steering Committee. April 11, 2008
>
> Kulakowski, D., T. T. Veblen, P. Bebi (2003) Effects of fire and spruce beetle outbreak legacies on the disturbance regime of a subalpine forest in Colorado. Journal of Biogeography 30 (9), 1445–1456.
>
> Romme, W.. H., J. Clement, J. Hicke, D. Kulakowski, L. H. MacDonald, T. Schoennagel, and T. T. Veblen. 2006. Recent forest insect outbreaks and fire risk in Colorado forests: a brief synthesis of relevant research. *Colorado Forest Restoration Institute*, Fort Collins, CO.

We again request the FS fully explain whether or not private landowners in the timber sale area have undertaken or are undertaking measures to create defensible spaces around their structures. If landowners have not taken such measures, then it is likely that the proposed fuels treatments around these properties will do nothing to protect homes or the land. The FS must give serious consideration to the effectiveness of its fuels reductions in relation to the protection actually afforded to people living within the forest.

- Spearfish Canyon MAP

A substantial portion of the proposed project area is designated Management Area Prescription 4.2A, or Spearfish Canyon. We sincerely hope the FS does not pursue any proposed actions within this MAP which will negatively impact the natural and irreplaceable values of Spearfish Canyon, such as the American dipper and Black Hills mountainsnail. We remind the FS that it cannot authorize or carry out any action that would cause an irreversible or irretrievable commitment of resources that would contribute to a trend toward listing under the Endangered Species Act of 1973. Any actions which impact these species and their habitat would be considered actions which could cause a trend toward listing of these species, and potentially other species found in this MAP.

- Environmental Justice

According to information provided by the U.S. Census Bureau, American Indians are the largest minority population within counties of the Black Hills. Accordingly, this

20

54. Private landowners are responsible to maintain defensible space surrounding their structures as required under applicable state regulations and local ordinances. The Forest Service has no authority or responsibility to enforce regulations and ordinances on private lands. The Forest Service has the responsibility on national forest lands to apply adequate preventative measures such as fuel treatments to mitigate the ingress of wildfire from private lands, or the egress of wildfire from federal lands onto private lands. Those activities adjacent to private lands specified in the DEIS are designed to uphold the Forest Service responsibilities

55. Impacts to species were analyzed in the Wildlife and Fisheries Resource Report (JW Associates 2008c) and no MIS or SS was determined to have a "may impact, is likely to result in federal listing" determination.

    The Project Area is not the appropriate scale at which to evaluate population viability because it is too small of an area. Population viability was evaluated in the Phase II FEIS, which determined that there would be adequate habitat to maintain a viable populations if Forest standards are followed. All alternatives follow the Forest Plan and relevant standards.

    Treatments proposed in Spearfish Canyon were designed very carefully to balance both forest-wide direction and the MA 4.2A standards and guidelines. Refer to snail discussion on FEIS page 132. Also refer to the final determinations on impacts of the project to snails and dippers in the Wildlife and Fisheries Resource Report (JW Associates 2008c).

56. A section addressing environmental justice has been added to the FEIS on page 262.

minority population may be disproportionately impacted by the West Rim timber sale. In accordance with Executive Order 12898 and Department of Agriculture Regulation DR5600-2, the FS must therefore fully analyze and assess the effects of the West Rim timber sale to American Indian populations to ensure environmental justice. Such an analysis and assessment should be consistent with the 1997 Council on Environmental Quality report, "Environmental Justice Guidance Under the National Environmental Policy Act." In accordance with this report and direction provided by NEPA and CEQ NEPA implementing regulations, the FS must fully analyze and assess the direct, indirect, and cumulative effects to American Indian populations in and around the Black Hills. Such an analysis and assessment should consider the cumulative economic impacts of the taking of the Black Hills to the Sioux and Arapahoe Indian tribes (see, e.g., United States v. Sioux Nation of Indians, 448 U.S. 371 (1980)), the impacts to American Indian feelings regarding the taking of the Black Hills, the direct and indirect impacts to American Indian religious interests, the cumulative impacts to American Indian religious interests, the cumulative impacts of restricting American Indian subsistence hunting in the Black Hills, the cumulative impacts to American Indian cultural values that have been destroyed through past actions that have been inconsiderate to these values, and the direct and indirect impacts to American Indian cultural values. The FS must fully mitigate any significant direct, indirect, and cumulative effects to American Indian values, interests, and claims in order to ensure environmental justice is achieved.

- Sacred sites

The DEIS fails to fully analyze and assess the potentially significant effects to American Indian sacred sites in accordance with Executive Order 13007. We request that all sacred sites be fully protected.

Alternatives not adequately Considered in the DEIS

We requested that the FS would rigorously explore and objectively evaluate the following reasonable alternatives for inclusion in the DEIS:

- An alternative that does not harvest or thin any stands of structural stage 4C and 4B to address concerns voiced by Shinneman and Baker 1997 and Baker and Ehle 2001 that the BHNF was historically more dense and supported more old growth;
- An alternative that addresses fragmentation concerns on the BHNF as outlined by Shinneman and Baker 2000;
- An alternative that proposes no overstory removal to retain large diameter trees that are more fire resistant;
- An alternative that does not allow harvesting of trees greater than 10" in diameter. This alternative will ensure that an adequate amount of larger diameter trees are retained for future snag creation and for the benefit of species dependent upon larger diameter trees;
- An alternative that decommissions the maximum amount of roads and ways possible within the project area;

21

57. Consultation with tribal council members, Tribal Historic Preservation Officers (THPOs), and the State Historic Preservation Officer (SHPO) was conducted in the early stages of the West Rim Project (i.e. concurrent with the public scoping period). No objections were received, nor were any previously unknown cultural areas identified.

    The West Rim Project Area was surveyed for cultural resources and all known occurrences within the project will be avoided.

    The issue of United States v. Sioux Nation of Indians is outside the scope of the West Rim Project, which affects a relatively small portion of the Black Hills.

58. The analysis of effects to heritage resources appears on pages 253-256 of the West Rim FEIS. The project area was surveyed for heritage resources and protective measures are detailed on pages B-1 and B-7 of the FEIS, which includes protection of all known sacred sites as well as any new sites discovered during implementation.

59. See response to comment 59 on following page.

- An alternative that proposes to designate all management area prescription ("MAP") 5.1 within the project area as MAP 4.1. This alternative proposes a nonsignificant forest plan amendment and will enhance wildlife habitat.
- An alternative that designates all stands of structural stage 4C as MAP 3.7. This alternative also proposes a nonsignificant forest plan amendment and will enhance wildlife habitat;
- An alternative that proposes only road decommissioning and closure, but no timber harvesting, thinning, or other vegetation treatments.

The Forest Service failed to analyze, in detail, the aforementioned alternatives, the agency must provide detailed discussion to support their elimination. Again, this discussion must include: 1) A discussion as to why the proposed alternative was rejected; 2) Analysis and information that supports the discussion; 3) If the Forest Service claims an alternative does not meet the purpose and need, the agency must provide a full analysis that shows exactly how an alternative will not meet the purpose and need; and 4) If the Forest Service alleges any other inadequacies (e.g., illegal, not in accordance with Phase I Amendment direction, etc.), the agency must provide a full analysis that shows exactly how the alternative is inadequate.

We also remind the agency that if any alternative is eliminated from analysis on the basis that it does not meet the purpose and need to "produce timber" or "provide commercial timber", the agency is unreasonably restricting the range of alternatives through an unreasonably narrow purpose and need. If the agency proposes a purpose and need that entails several objectives (e.g., wildlife habitat enhancement, improve forest health, etc.), then the agency must analyze all alternatives that meet at least one of the objectives.

We hope the agency chooses a different path with regards to the proposed West Rim timber sale and sets a new and necessary standard of ecosystem management on the BHNF. While we do not request the agency pursue a No Action Alternative, we do request the agency not undertake any logging, thinning, or any other vegetation management. We do request the agency undertake road decommissioning and closure throughout the West Rim timber sale area.

Sincerely,

Duane Short, individually and for
Biodiversity Conservation Alliance
PO Box 1512
Laramie, WY 82073
(307) 742-7978
duane@voiceforthewild.org

and on Behalf of:

59. Alternatives are typically generated during the scoping period, prior to the development of the DEIS, with input from public scoping comments. Biodiversity Conservation Alliance (BCA) did submit scoping comments that contained the same suggested alternatives as those listed here. Each of the alternatives was considered but eliminated from detailed analysis. The reasons are documented in the FEIS on pages 36-38.

Nancy Hilding, individually and for
Prairie Hills Audubon Society
P.O. Box 788
Black Hawk, SD 57718

23

Additional References Cited

Anderson, C., and S. Sarver. Final Report: Evaluation of DNA Microsatellite Fingerprinting Markers for the American Dipper, *Cinclus mexicanus.* Department of Biology, Black Hills State University

Anderson, C.M., G.M. Spellman, C.S. Ferrell, K. Strickler and S.K. Sarver. 2007. Conservation genetics of the American Dipper (Cinclus mexicanus): the genetic status of a population in severe decline. (In Press, Conservation Genetics)

Belsky, A.J. and D.M. Blumenthal. 1997. Effects of livestock grazing on stand dynamics and soils in upland forests of the interior west. Conservation Biology 11:315-327.

Hargis, C.D., C. McCarthy, and R.D. Perloff. 1994. Home ranges and habitats of northern goshawks in eastern California. Studies in Avian Biology. 16:66-74.

Patla, S.M., 1997. Nesting Ecology and Habitat of the Northern Goshawk in Undisturbed and Timber Harvest Areas on the Targhee National Forest, Greater Yellowstone Ecosystem.

Reynolds, R.T., and H.M. Wight. 1978. Distribution, density and productivity of accipiter hawks breeding in Oregon. Wilson bulletin. 90: 182-196.

Reynolds, R.T. 1979. Food and habitat partitioning in two groups of coexisting Accipiter. Corvalis, Oregon: Oregon State university. 116 p. Ph.D. dissertation.

Sarver, S [1,2]., C. Ferrell[1,2], R, Mettler[1], G. Spellman[1,2], and Cynthia Anderson[1,2]. Conservation genetics of the American Dipper (Cinclus mexicanus): declining population size in an impacted population in the Black Hills of South Dakota. 1Center for the Conservation of Biological Resources, Black Hills State University, USA; Western South Dakota Core DNA Lab, Biology Department, Black Hills State University, USA

Smith A. A., and R. W. Mannan.1994. Distinguishing Characteristics of Mount Graham Red Squirrel Midden Sites. *The Journal of Wildlife Management*, Vol. 58, No. 3 (Jul., 1994), pp. 437-445.

Suggested Reading: Bark Beetle and Disease Science

Negron, J.F., K. Allen, B. Cook, and J.R. Withrow Jr. Susceptibility of ponderosa pine, *Pinus ponderosa* (Dougl. Ex Laws.), to mountain pine beetle, *Dendrotonus ponderosae* Hopkins, attack in uneven-aged stands in the Black Hills of South Dakota and Wyoming USA.

Worall, J.J., L. Egeland, T. Eager, R.A. Mask, E.W. Johnson, P.A. Kemp, and W. Shepperd. Rapid mortality of *Populus tremuloides* in southwestern Colorado, USA. Science Direct. Forest Ecology and Management 255 (2008) 686-696. Available online: www.elsevier.com/locate/foreco or www.sciencedirect.com

Black Hills Forest Resource Association

2218 Jackson Boulevard. Suite 10. Rapid City. South Dakota 57702-3452. (605) 341-0875

Ms. Rhonda O'Byrne
Northern Hills Ranger District
2014 N Main Street
Spearfish, SD 57783

July 21, 2008

Dear Ms. O'Byrne,

This letter is in regards for a request of public input regarding the West Rim Draft Environmental Impact Statement. The Black Hills Forest Resource Association thanks you for the opportunity and looks forward to helping actively manage this valuable resource.

Purpose and Need

We find the proposed Purpose and Need to be very much in line with the Phase II Forest Plan Amendment. Addressing the heightened risk of fire in the proposed project area boundary seems to be a solid start. With several recent fires in the area, including the larger Grizzly Gulch fire of 2002, reducing the fire risk rating to lower levels would be applauded.

With the continued beetle outbreak, we believe the proposed treatments would also help to reduce infestation risks and mitigate future outbreaks in years to come. Even though we have had above average rainfalls this spring and summer which have aided trees in resisting and fighting beetle attacks, the beetles will still remain and this EIS actively decreases risk of outbreak in the project area. We recommend a provision be added which allows the opportunity to react to any serious wildfire or beetle outbreaks that may occur throughout the life of this project. This would justify salvage and sanitation harvesting to be done on affected areas.

Increasing stand diversity through structural stages also achieves a happy balance between plant and wildlife populations while reducing the risk for severe fire and beetle outbreaks. This is very much encouraged.

Alternatives

After reading the proposed alternatives, we recommend Alternative C as the best option. This alternative satisfies the needs of several interests and the benefits following the proposed activities far outweigh those of any of the other two alternatives. The BHFRA feels it is both environmentally sound and economically logical for all parties involved. It would also fulfill the obligation of the USFS to reduce the risk of serious wildfire

A renewable resource

Letter - 6

Type - Organization

60. The FEIS (pages 34-35) proposes sanitation harvest be used as a quick response to mountain pine beetle infestations.

within the WUIs associated with the Lawrence County's Community Wildfire Protection Plan.

Harvesting Methods

There seems to be some confusion on harvest methods referenced in the Timber Harvest section on pg B-4 of the Design Criteria (whole tree yarding v. log length yarding). We would recommend further clarification in the Design Criteria and timber sale contract, what method of yarding is desired (is log length yarding equivalent to whole tree yarding?), or even better, to state the desired outcome of the applied activity and not involve specifics pertaining to harvesting methods.

61. The specific harvest system to be employed for any given area to be treated would be determined at the time of layout. The harvest system selected will be based on topographical considerations, acceptable levels of residual fuels within stands, and soil nutrient requirements. In general, whole tree yarding is preferred within the WUI to reduce fuels.

In the Design Criteria for Soil and Water requirement #5 (pg. B-6) and the top of pg. 217, all of the units in the West Rim project will require either a.) conventional harvest systems that retain slash or b.) if whole tree harvesting is used, 50-90% of all slash less than 3" in diameter would be returned to the site per Forest Plan Guideline 1102 (a). In contrast, at the top of pg. 69, whole tree yarding would be required in all commercially harvested units to limit the amount of surface fuels added to the stand from harvest, although there is no corresponding language in the Design Criteria.

I believe the assumption on pg. 69 that whole tree yarding typically leaves approximately 25% of the total created fuels in the unit, is correct. It appears that the discussion on pg. 217 regarding Standard 1102(a) changes the context from "On soils... with organic matter less than 2%" to "All the surveyed soils that have the potential of soil organic matter content at less than two percent". We also recommend that you allow either whole tree harvesting or conventional logging without requirement for returning slash to the site.

62. Whole tree yarding would leave up to 25% of the fuels on-site, and pre-commercial thinning would add to the down materials that would contribute to the soil organic matter. The organic matter from those materials would likely be enough to maintain nutrient levels. The design criteria has been changed (see Appendix B).

There also seems to be several areas identified in this project that indicate steep slopes. These areas have accessibility and operability limitations for both conventional and mechanized harvesting systems. We recommend that skyline logging be assigned as the harvest method of choice for these areas. This method is an effective way to harvest areas of excessive slope and it is important to include this tool in present and future sales.

Forest Plan Direction

We recommend that you clarify "late successional pine forest" and "old growth stands" as used on pages 55 and 255. The forest plan gives no requirement or definition for "old growth", and our understanding is that "late successional applies only to MA 3.7.

63. Late successional forest does not only apply to MA3.7. The Forest Plan sets goals for the distribution of forest structural stages, including late successional forest (SS5), for other Management Areas (Section 1.5.2 of the FEIS and Chapter 3 of the Phase II Forest Plan). The term old growth forest is not used in the Forest Plan and this term has been changed in the FEIS.

On page 73, the EIS states that forest-wide, the spruce cover type is found on 26,483 acres. This number does not account for the spruce beginning to take over the seral pine stands and in some areas spruce is growing in offsite areas. We are very concerned that this type of conversion is not being recognized and dealt with by the USFS. The DEIS for the West Rim Project states that spruce in the BHNF is on an "upward trend" (pg. 73)

64. See response to comment 64 on following page.

and provides an ecologically important niche in the forest community. This statement is consistent with Phase II of the Forest Plan. The Forest Plan states a target objective of 20,000 acres of spruce. With these numbers, we feel that treatment of spruce stands should not be off-limits and some type of management treatment should be considered.

Throughout the DEIS, there was no reference to the issue of tree mortality during prescribed burns. We feel strongly about this matter in that some sort of parameter should be set which would set some type of objective and allow for further monitoring following completion of the burn. We strongly recommend the overstory tree mortality rate from prescribed fires be set at less than or equal to 5%. We further recommend that there be a clause to allow salvage logging if large pockets of mortality occur that are still at levels of 5% or less.

On Tables 24-29, there are several species categorized under the column heading "Sensitive Species" that are not Sensitive Species. We feel that a column heading of just "Species" would suffice.

Analysis for Sensitive Species and Species of Local Concern

We are concerned about the level of analysis for sensitive species and species of local concern in the West Rim DEIS. The Phase II Amendment analyzed and addressed each of those species in detail, and concluded that "Region 2 sensitive species could be affected as individuals, but there is not likely to be a loss of viability in the planning area nor a trend toward federal listing" and "Species of local concern are likely to persist in the planning area" (Phase II Amendment ROD-6).

Using northern goshawk as a specific example, the Phase II Amendment FEIS analyzed the northern goshawk and northern goshawk habitat in considerable detail on pages C 232 – 244. Based on an analysis of the various alternatives, page III-152 of the Phase II Amendment FEIS contains a determination of "may adversely impact individuals, but not likely to result in a loss of viability in the Planning Area, nor cause a trend toward federal listing" for the northern goshawk". The Phase II Amendment ROD further states, "All alternatives will maintain goshawk viability" (ROD-7).

If the Forest Service has already determined that the forest plan will maintain goshawk viability and if the West Rim Project conforms to the forest plan, then it would seem that further analysis or conclusions about goshawk viability in the West Rim EIS are neither necessary nor appropriate.

We are also concerned by the statements on page 102 states that Alternative B and Alternative C would not result in a loss of viability in the Project Area. To our knowledge, there is no requirement for species viability within a Project Area, and that conclusion should be deleted.

64. The acreage of spruce is based on those stands that are identified as having a spruce cover type (i.e. a majority of the stand is spruce). This does not take into account those stands where there is a spruce component with a pine or, possibly, aspen cover type.

    The spruce objective allows for the harvest of spruce under certain conditions (i.e. near structures, to benefit specific resource needs). The objective is not intended to generate widespread spruce harvest for the sake of reducing acreage. Widespread commercial harvest of spruce is economically infeasible and has potential negative effects on remaining spruce in the stand (windthrow in particular). Because spruce is a valuable habitat component for several wildlife and plant species of concern, harvest is only conducted with very good justification.

65. Thank you for your comments

66. Thank you for your comments. Tables 24,25, 26, 28, and 29 have been modified.

67. Please see response to comment 11 on page D-10

68. The Forest Plan doesn't analyze site specific effects to resources. These must be analyzed at the project level to determine site specific impacts and to provide the decision maker with a basis for selecting the alternative that best balances benefits and effects.

We recommend that you reconsider the level of analysis and conclusions for the northern goshawk and for other sensitive species and species of local concern in the West Rim FEIS and in future project analyses on the Northern Hills RD.

Goshawk

According to page 101, no treatments are proposed within the three identified goshawk nest areas. We request that you take another look at some treatments in the goshawk nest areas. Forest Plan Standard 3108a clearly allows treatment within goshawk nest areas, as long as any activities will maintain or enhance the stand's value for goshawk.

As accurately discussed on page 101 in regard to Alternative A, stand-replacing fire has the potential to destroy nest trees and other habitat areas. For example, the Jasper Fire completely burned 7 goshawk nest stands. We believe that goshawk nest areas should be managed to reduce the risk of stand-destroying fires. In effect, Alternatives B and C would also implement a No Action Alternative within the goshawk nest areas, and that may lead to adverse effects. We recommend that you develop a Desired Condition specifically for the goshawk nest areas, and that you develop prescriptions to move those stands toward the Desired Conditions as part of this project. Reducing the susceptibility of the nest areas to fires and mountain pine beetles will likely benefit goshawk populations and habitat over the long-term.

Page 133 - Birds

Several other creeks in the Black Hills, including Rapid Creek and Whitewood Creek, currently support American Dipper populations.

Design Criteria

Page B-2

We recommend that skid trails, landings, and temporary roads be allowed in meadows unless there is some reason not to allow those on a site-specific basis. The terminology is worded such that activities associated with harvesting be "avoided as much as possible", which could easily be interpreted as "No skid trails, landings or temporary roads will be allowed in meadows." These meadows play an important role in staging different aspects of the harvest as well as piling and burning slash.

In regards to the Noxious Weeds section, we agree with the intent but the design criteria requires equipment cleaning before leaving a unit, while the timber sale contract provision B 6.35 requires equipment cleaning before entering a unit. The design criteria should be consistent with the timber sale contract.

69. No treatment areas are limited to identified goshawk nest areas, of which only three exist in the Project Area. Nesting habitat consists of primarily dense coniferous forest with greater than 50 percent canopy cover (FEIS page 104) limiting treatment that can occur in these areas and complying with Forest Plan standard 3108.

    Treatments were considered in the nest areas, but none that would maintain or benefit the nest stands were identified. Many of the nest stands are marginal goshawk habitat and any treatments would move them away from the preferred habitat conditions. Treatments conducted adjacent to nest areas would reduce the fire hazard in those stands and provide a potential buffer to keep fires from impacting the nest areas.

70. Spearfish creek and its tributaries are considered to be the only creeks in the Black hills capable of supporting a self-sustaining population of dippers (Backlund 2005). Rapid creek and Whitewood creek have had historical use but recent surveys indicate limited nesting (1-2 nests) or no nesting (Backland 2007), and are not considered to represent self-sustaining populations.

71. Meadows provide unique habitats and are protected as much as possible during project activities by this Design Criteria. Location of skid trails, landings and temporary roads in meadows would be evaluated during harvest planning for each specific unit that contains meadows.

72. The design criteria language has been changed in the FEIS to match language in the timber sale contract provisions.

Page B-3

There is also a clause that states activities relating to scenery require "natural levels" of slash. Please define in the FEIS and timber sale contract, what natural levels of slash would be.

73. The "natural levels of slash" is considered to be that existing prior to any activity treatment that creates additional slash. The return to "natural levels of slash" would treat additional slash created by treatments and reduce the slash to an approximate level commensurate with the level that existed prior to any treatment(s).

Furthermore on the same page, snags and down logs are addressed. Several stipulations cover this topic as well as woody material. We feel that snags and down logs play an important role for habitat to many species and would recommend modifying the Design Criteria to read "No snags will be cut except for safety reasons or when necessary for construction of roads, skid trails, fire lines, and log landings." Would you also define what constitutes a "pile of woody material"? If one "pile of woody material" is required on every two acres, we recommend that you make a separate appraisal allowance for that work.

74. The provision that snags over 20 inches dbh be retained unless a safety hazard is in place because of the relative scarcity of large snags on the Forest and their importance to several wildlife species.

The team that developed the Phase II Amendment defines a pile as "small handpiles that would be considered to generally 'melt away' within five years."

Under Soil and Water, the Design Criteria initially speaks to "soils identified as having a potential for severe erosion". However, the Design Criteria then requires all heavy equipments to avoid all "swales" except to cross at designated points, etc. Does this apply to all soils or just soils with potential for severe erosion? There is no definition of "swale". We recommend that you either define or delete "swale" from the Design Criteria, preferably the latter.

75. A swale is a depression that gathers and holds more water than the surrounding area. The design criteria applies to all soils because swales might also be defined as wetlands.

Page B-5

Timber sale contract provision B 6.24 requires that "Areas, known by the Forest Service prior to timber sale advertisement, needing special measures for the protection of plants... are shown on the Sale Area Map and/or identified on the ground". We recommend that you clarify that these areas will be specified on the sale area map and preferably on the ground.

76. Thank you for your comment

Under Recreation regarding Timber Harvest, we were encouraged with the recent meeting to discuss coordinating timber harvest and snowmobile trail use. We recommend that you include enough flexibility in the selected alternative to allow for year to year modification regarding future trail use.

77. The snowmobile routes are re-evaluated on a year to year basis already and, each year, the routes for the coming snowmobile season are approved under a categorical exclusion. This allows the flexibility to change routes as necessary (depending on which timber sales are active) on a year to year basis. Because such a system is already in place, it is unnecessary to include it in the selected alternative for the West Rim project.

Page B-6

On this page of the Design Criteria, please define "Slash in".

78. Slash in means to distribute slash across the surface of the skid trail to discourage use and to minimize erosion.

We also recommend rewording the first Design Criteria under wildlife to read "No treatments will be conducted within 500 feet of adit portals or shaft openings of mines or caves that are identified as bat roost habitat.", in order to assume that treatments will not be restricted unless there is a positive finding of bat roost habitat.

79. Design criteria as written provide protection for bats in mines and caves that have not yet been surveyed, which represent the majority of the sites in the Project Area.

Regarding snail sites, timber sale contract provision B 6.24 requires that "Areas, known by the Forest Service prior to timber sale advertisement, needing special measures for the protection of ... animals...are shown on the Sale Area Map and/or identified on the ground...". We recommend you clarify that these areas will be shown on the sale area map and/or the ground.

80. The design criteria (Appendix B) have been modified to state that those locations will be shown on the sale area map.

On the same page under Timber Harvest, we feel that cutting and hinging all conifers within Hardwood Enhancement Units to remove encroaching ponderosa pine and spruce would not be effective. We understand the concept behind 'hinging' conifers, but feel that it would be ineffective at keeping elk out. We propose two alternatives regarding coppice regeneration in aspen stands. First would be to consider the alternative of forest fencing around treated aspen stands for a period of years until suitable regeneration is achieved (See attached Rolf 2001). We believe that in a stand with too few conifers, that this is a viable option after conifer removal. This is a proven method supported by significant amounts of research conducted by the USFS. Much of the funding and labor could be found through the local chapter of the Rocky Mountain Elk Foundation. Our second option would be effective in aspen stands containing a significant amount of conifers. We would advocate the felling of all conifers in a random mosaic pattern. On sawtimber trees, we would like to see the bottom merchantable log be salvaged, resulting in only the top being left to lay in whole form. We feel that these tops will create a favorable micro-climate that will benefit the growth of aspen suckers, while protecting them from browsing animals.

81. Thank you for the suggestions regarding aspen management and the options for preventing browse on young aspen. No coppice harvests are planned for the project area. The hardwood enhancement treatments would not remove any mature aspen to encourage regeneration. Instead the objective of these treatments is to remove the encroaching conifers from within and adjacent to established aspen stands. Some aspen regeneration will likely result from this treatment as the existing clones spread into the openings created from the conifer removal. Also, larger conifers will be removed from the Commercial Hardwood Treatment units; see the description of the proposed treatments in section 2.2.4 of the FEIS.

Page B-7

On this page, the issue of scorching raised some concern. We feel that any scorching that occurs would only be visible for a year or two and the long-term benefits are substantial. We do not agree with burning the understory only and leaving the overstory untreated. This does not align with the purpose and need of this project. We feel that overstory treatments in the stand should be conducted all the way to any roads occurring within the project area boundary, followed by any prescribed burning that is to occur. This is a good way to show the public and example of active forest management.

82. The design criteria to minimize the scorching of overstory trees visible from highway 14A and 385 does not restrict the treatment of overstory trees in these areas or prevent the burning of fuels adjacent to these roads. This design criterion can be met by implementing measures during prescribed burning operations that minimize the intensity of the burn adjacent to these trees.

Page B-8

We are concerned about the stipulation regarding "slash piles immediately adjacent to designated snowmobile or cross-country ski trails will not be burned between December 1 and March 31 to prevent melting of the snow on the trail". We believe that a.) Slash piles should not be piled there in the first place, or b.) Coordination with local snowmobile and ski groups would allow for alternative routing of the trail and trail heads before the season begins. To us, the benefits of successfully burning these slash piles during optimal periods that are far from the traditional fire season out weigh the recreational uses. Basically it's easier to reroute a trail than to risk not getting the piles burned.

83. The design criterion in question was developed largely with the Eagle Cliff cross country ski trails in mind. These are well-established, groomed routes that may be difficult to re-route. The time restriction identified in the design criterion should still allow for desirable burning conditions in that area early in the winter or early in the spring.

Additional language stipulating that the piles be placed a certain distance from the trails to avoid melting the snow during burning will be considered for the FEIS. In some cases, terrain may prevent piles from being placed a suitable distance from the trail, so the time restriction would still be necessary to mitigate effects.

Page B-11

In regards to the first criteria in both wildlife and timber harvest, we strongly recommend that you do not limit thinning to trees less than 9" dbh in Spearfish Canyon. The Purpose and Need for the project is "to reduce fire hazard and risk of mountain pine beetle infestation and to increase structural diversity". Thinning only trees less than 9" dbh will not accomplish any of those. We would ask that this dbh limit of 9" be increased to a larger diameter in the 686 additional treated acres, or that the 9" dbh treatment be only applicable to the 13 acres of suitable snail habitat within the fuel treatment areas of Spearfish Canyon (pg. 127). Is mitigation of a serious wildfire a consideration in deciding management direction for the Cooper's Mountain Snail? Objective 234 in Phase II of the Forest Plan appears to address the issue of high-intensity fire in these areas, and allows for more options concerning these areas.

84. The objective of the treatments proposed within Spearfish Canyon is to reduce the threat of wildfires occurring near structures and along roads. These fuel reduction treatments do not include the removal of trees larger than 9 inches because these larger trees would require heavy equipment for removal and are commercially valuable. Retaining the larger overstory trees in these areas also helps to maintain shaded conditions that provide a cooling affect in the microclimate of the area, which also helps to minimize fire ignitions and fire intensity. There are many unique and sensitive resources within the Spearfish Canyon including riparian habitat, sensitive plant species habitat as well as snail habitat. The intent of these treatments is to address the wildfire issue while also meeting objectives for other resources within the Canyon.

Furthermore on the same page in the soils section, we see no reason to limit fuel reduction treatments within 300 feet of private structures to 30% slope or less. Most of this work will be done by hand and slope tends to be less of an issue than with mechanized equipment. We strongly recommend that you give yourself the latitude to allow thinning up to 50% slope.

85. Reducing vegetation on slopes of over 30 percent increases the risk of erosion, whether the treatments are conducted with machinery or by hand. The slopes in Spearfish Canyon have mass movement potential, which is why this limitation was adopted.

Monitoring

Finally the monitoring requirements listed should go beyond implementation details and address whether or not the project successfully addressed the achieved the Purpose and Need that was set forth. Specifically, the Purpose and Need for the project is "to reduce fire hazard and the risk of mountain pine beetle infestation and to increase structural diversity". We recommend that you add specific monitoring requirements to measure whether or not the project was successful in achieving those three desired outcomes.

86. Comment noted. In addition to the project specific monitoring listed within the FEIS, the Black Hills National Forest also conducts Forest Plan Monitoring annually. This effort focuses on monitoring effectiveness in meeting or moving toward established objectives set forth in the Forest Plan. The Forest has developed a "Monitoring Implementation Guide" to describe methods to implement the monitoring and evaluation requirements of the Forest Plan; see http://www.fs.fed.us/r2/blackhills/projects/planning/MonGuide.pdf

We would like to thank you for your time and consideration to the above mentioned. We look forward to seeing the final results!

Sincerely,

Carson Engelskirger
Forest Programs Manager

Aspen Fencing in Northern Arizona: A 15-Year Perspective

James M. Rolf[1]

Abstract—*Aspen clearcuts in the 1960s and 1970s on the Peaks Ranger District of the Coconino National Forest in northern Arizona failed to regenerate successfully because of browsing primarily by elk. Since 1985, over 400 acres have been successfully regenerated using fencing of various designs to exclude elk. The expense and visual impact of establishing and maintaining over 20 miles of fence along with continued damage to aspen greater than 3.0 inches d.b.h. outside the fenced areas have resulted in the Arizona Game and Fish Department increasing the elk hunting permits by 400% in an effort to reduce the elk herd in the area of the San Francisco Peaks.*

The Coconino National Forest, located in northern Arizona, encompasses 1.5 million acres of forested land consisting mostly of ponderosa pine (*Pinus ponderosa*) and pinyon pine-juniper (*Pinus edulis-Juniperus* spp.) woodland. Aspen (*Populus tremuloides*) comprises 10,500 acres (less than 1%) of the forest. The forest around the San Francisco Peaks contains 98% of the aspen on the Coconino. In most cases aspen is a minor component of extensive ponderosa pine and mixed conifer forests. Pure aspen stands are usually small and surrounded by encroaching conifers, especially on warmer, drier sites. Many of these isolated stands consist of a single genotype (clone) that is critical to the forest ecosystem. Often, these isolated clones occur in environments where competition for moisture and light, or pressure from browsing animals, severely stress aspen's ability to persist in the landscape. These forests are heavily used during the summer and winter by recreationists and highly valued during the fall leaf change by the public from around the state. Public interest in the scenic beauty of aspen and the limited quantity of aspen on the forest have focused management objectives on perpetuating these aspen stands while maintaining mature aspen in our landscapes.

While the Forest Service manages the vegetation, the Arizona Department of Game and Fish manages the wildlife populations. The original population of Merriam elk (*Cervus elaphus merriami*) went extinct during the period of market hunting and agriculture at the end of the 19th century. Elk numbered only 90,000 across North America in 1922, and of these, 40,000 were in Yellowstone Park. The Park's herds became a reservoir for breeding elk. Between 1912 and 1967, more than 13,500 elk were transplanted from the Park. In February 1913, 83 elk were released in Cabin Draw near Chevelon Creek in east-central Arizona. From these transplants, the Arizona elk population has grown to nearly 35,000 animals. This population is very important to the economy of northern Arizona through revenue generated from hunting and tourism.

In the 1960s, the Peaks Ranger District began regenerating aspen using public fuelwood clearcuts. A total of 254 acres were treated with cattle fencing as the only protection. Nearly all of these areas failed as repeated browsing prevented the successful regeneration of the aspen (figure 1).

In 1985, a one-half acre portion of one of the earlier clearcuts was fenced with salvaged material to exclude deer and elk. The fencing was stapled to live

[1]Silviculturist, Peaks Ranger District, USDA Forest Service, Flagstaff, AZ.

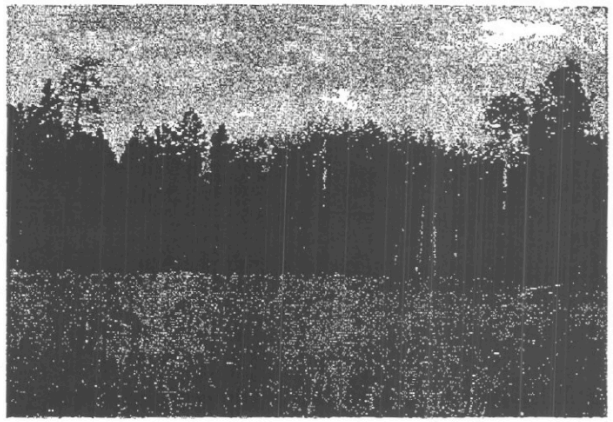


Figure 1--Failed aspen fuelwood treatment.

trees surrounding a clearcut that had been cut several years earlier. The suckers were heavily browsed, but existing root reserves were sufficient to regenerate the area once the fence had removed the browsing pressure.

Since 1986, approximately 400 acres have been treated and protected with fencing. This required construction of over 20 miles of fence. Over the years, several different designs have been tried in an effort to find the best balance between durability and cost. The majority of the fences consist of two 39 inch panels of 14-gauge field fence overlapped and joined with hog-rings to create a 6½-foot fence. The fence is stretched between existing trees, especially at the corners, to avoid building braces. Where trees are used to support the fence, the fencing is stapled to 8-foot wooden 2 x 2s wired to the tree to avoid stapling directly to the trees. Eight-foot steel T-posts are placed at 22-foot intervals between trees to provide additional support. These fences were constructed at a cost of $6,000/mile evenly split between labor and materials. The current fence design utilizes a single 47 inch panel of 14-gauge field fence together with three strands of high-tensile wire instead of two 39-inch panels. The first strand of high-tensile wire is positioned 6 inches off the ground with another 6 inches to the bottom of the field fence panel. The second and third high-tensile strands are positioned above the top of the field fence panel at 6–12 inch intervals (figure 2).

The high-tensile wire is stretched with wire strainers between the same trees that are used to stretch the field fence. Steel posts and wooden 2 x 2s are placed the same as the previous design. Eliminating the second field fence panel reduces the cost of materials by $1,200/mile and saves an additional $1,000/mile in labor. We also built several solar powered electric fences using ½-inch polytape and 9-strand polywire in a double fence design. Two areas of 35 acres were fenced using this design. This promised a 60% savings in material and labor costs, but the design was ultimately rejected because of extremely high maintenance cost and low durability.

Funds for the fencing projects came from three sources. The fuelwood clearcuts generated sufficient revenue from the sale of aspen fuelwood and pine sawtimber greater than 12 inches d.b.h. to pay for the material and labor costs

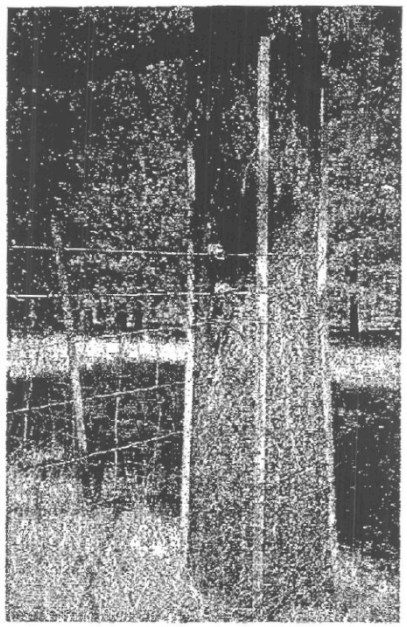


Figure 2—Current fence design.

of the fences. The areas were between 16 and 40 acres. These were handled under our small sales program and involved quantities less than 50,000 board feet. Numerous small clones less than 5 acres in size were treated as part of a larger timber sale that removed the competing pine and provided Knutson-Vandenberg (K-V) funds to pay for the fences. Several individual small clones were fenced with material donated by partners (i.e., Coconino Sportsman, Rocky Mountain Elk Foundation, and Arizona Game and Fish Department) and constructed with volunteer labor (Elderhostel International, Coconino County Probation Crew, Americorps, and Youth Conservation Corps).

The original prescription required that the fences be removed after 70% of the aspen stems were over 12 feet tall and beyond the reach of the elk. It was anticipated that 3 to 5 years would be needed to reach these conditions. A 22-acre aspen stand clearcut in 1986 had the fence removed in October 1991 with 20,000 stems per acre and dominant stems 12–15 feet tall after five growing seasons. By October 1992, most of the stems in one clone had been severely damaged by elk. Damage was caused by biting and breaking the stems at a height of 5 feet, stripping the terminal foliage, and infecting the residual stem. This clone was almost completely gone by October 1994 (figure 3).

Although other clones also suffered extensive browsing, stems larger than 1.5 inches d.b.h. were too large for animals to break. Unfortunately, elk are stripping the bark from the larger stems, resulting in infection and/or girdling. Current estimates are 10 to 15 years before fence removal.

Roll

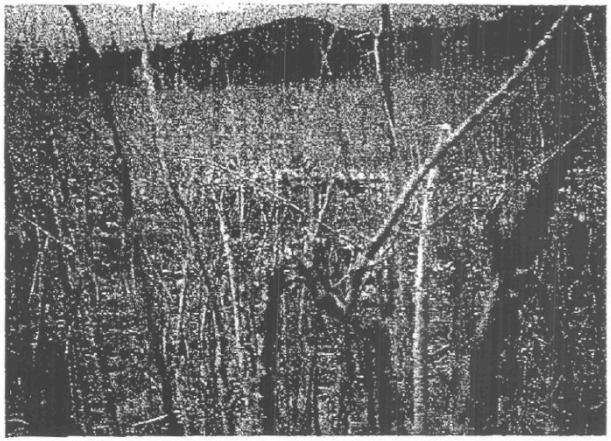


Figure 3—Severe elk damage.

With fences between 5 and 50 acres in size, some amount of damage can be expected during the first couple of months as elk and deer crash into the fence until they learn to travel around it. On fences under 5 acres, little or no damage occurs as animals can easily move around the fences. The one fence greater than 50 acres is 130 acres and 2 miles in length. With the exception of the solar powered electric fences, this fence has experienced the highest amount of damage from elk, tree tops falling on the fence, runoff washing out sections of the fence, and woodcutters breaking the fence to access the fuelwood. The fence bisects several travel corridors and the animals have persisted in going over or through the fence. A different design consisting of two smaller fences with room to travel in-between would be a better solution. The addition, 1 year ago, of two strands of high tensile wire at the top of the fence has greatly reduced the impacts from elk.

In the summer of 1996, about 16,000 acres burned north of the San Francisco Peaks. About 1,200 of these acres contained aspen. In spite of a reduction of the elk herd in the Unit by about 30% (2,500 to 1,870) over the last 4 years, elk made heavy use of most aspen suckers that grew after the burns of 1996. These aspen stands have a 3- to 5-year period to become established before exhausting the root reserves. The fire that produced the new aspen suckers burned in the San Francisco Peaks area, Game Management Unit 7 East. The Arizona Game and Fish Department proposed to significantly reduce the elk herds in Unit 7 for a period of 10 to 15 years. This effort should enable aspen suckers resulting from the wildfire of 1996 to survive and grow sufficiently to withstand the browsing of elk. It is also expected that there will be a decline in the barking and browsing damage to the larger established aspen trees.

Letter - 7

Type - Organization

District Ranger Rhonda O'Byrne
2014 Main Street
Spearfish, SD 57783 21 July 2008

Re: West Rim Project EIS

Dear Ranger O'Byrne:

Following are SCOA comments on the West Rim Project EIS:

These comments further expand on those submitted by SCOA on 1 Sept 2007 re the draft Project description. Since those comments were submitted, SCOA has been involved in 3 meetings with your personnel, Black Hills supervisor Bobzien, Lawrence County Commissioner Jim Seward, Lawrence County Timber Committee Chairman Bill Coburn, and SD State Forestry officials. SCOA also hosted a meeting on 3 April with Rob Lehmann, SD State Forestry and several from his office, Commissioner Seward, Bill Coburn, Paul Thomson, Lawrence County Emergency Management, and the SCOA and Spearfish Canyon Volunteer Fire District Boards. Each of these meetings has dealt with questions of management and funding of the concepts outlined to date for the Alternative C as described in the EIS. SCOA understands that these concepts have yet to be fully developed and that is why we take the positions outlined below.

At this time, SCOA supports Alternatives B and C, with C being the preferred Alternative if the management and funding issues can be more fully developed such that the Canyon owners understand and can support their role in executing Alternative C.

(1) The meetings noted above and continuing dialogue with USFS personnel regarding the 300 foot buffer around structures in the Canyon have not, at this point, led to resolution of the management approach and funding availability for homeowners.

a. Dialogue with the State Forester indicates work on private land is limited in funding support to $1000/acre, with the cost being split with owner reimbursement to 50% of the costs. Since the average SCOA lot is closer to ½ acre, it would appear the maximum funding available to the owner would be on the order of $250 if he/she chooses to develop a fuels reduction plan for the property, obtain State approval, engage an approved contractor, execute the plan and then obtain the $250 share. Our owners' experience with tree removal on their property indicates a single large spruce or pine costs more than $500 for cut, trim, removal by a contractor. Thus treatment of some properties could result in cost of several thousand dollars.

b. Lawrence County has set aside funding to assist homeowners, but details of how these funds would flow among homeowners, USFS, State, for work on private properties in conjunction with work on USFS land adjacent to the properties is as yet undefined.

c. Although pages 28 and 29 of the Draft EIS list detailed activities and

1

87. Thank you for your comments. The purpose of the West Rim EIS is to analyze the environmental effects of the proposed activities. The EIS discloses the effects of the proposed actions so that the public is aware and can contribute to the process and so the District Ranger can make an informed decision on which course of action to take. The EIS is not meant to determine how funding from other entities (i.e. State, County) will be used to implement the activities. Once the NEPA process is complete, the District Ranger will determine which alternative to implement. If Alternative C is chosen, an implementation plan would be developed and further meetings with private, State and County interests would be necessary to answer these questions.

restrictions for Alternative C and creation of the WUI buffers, there is no management or funding information as to how these joint homeowner/USFS property efforts would be executed. It does make it clear that homeowners would be responsible to initiate a plan, submit it to USFS for approval(including selection of a USFS-approved contractor we assume), execute it and, as noted in a. above, regain a portion of the total cost after the effort is completed. Thus, the homeowner would be responsible for two plans, one for the work on the private property and one for the work on USFS land.

d. Until there is closure on a detailed plan describing: (1) how the individual owner initiates the actions, and with how many agencies(e.g., USFS, State, County) for efforts on private land and on adjacent USFS land, (2) funding availability including when it becomes available to the owner and the maximum available, homeowners cannot be expected to support Alternative C and EIS as it now exists.

e. Recent discussions with USFS personnel indicate there is not yet agreement on these implementation and funding details and further discussions will be needed. The "Summary" document for West Rim EIS, page iii, in describing Alternative C, leaves open the question of funding for the 300 foot buffer, other than to say…"any treatment on private land is the responsibility of the homeowner."

(2) The last sentence on page 29 of the draft EIS states…"if selected and implemented, the fuel reduction activities under Alternative C would supercede the Spearfish Canyon 2 Categorical Exclusion and ongoing activities under that document would cease."

Cessation of Spearfish Canyon 2 is unacceptable to SCOA, and would result in no support for Alternative C. In 2002-3, SCOA and USFS(Pam Brown) had extensive dialogue regarding potential USFS fuels reduction activity in the Canyon(there had been none since formation of SCOA in the early 90's), and SCOA committed to creating a FIREWISE plan for the 140+SCOA primary members(those owning prior Homestake lots) and encouraging all SCOA members(private owners of other-than-Homestake lots who have chosen to join SCOA, approximately 60 additional owners) to get FIREWISE assessments completed for their lots. USFS initiated Spearfish Canyon 1 and, subsequently Spearfish Canyon 2, which is continuing. Joint efforts, including FIREWISE day(s) each summer, where USFS crews, if available, and SCOA members completed a day of intensive cleanup efforts(again planned for 23 August this summer), have continued. SCOA has completed more than 70% of the individual homeowner's assessments to FIREWISE criteria. The assessment checks are done with the homeowner present(difficult when many are here for only a short time each summer) and to criteria developed by Spearfish Canyon Fire Department Chief, our FIREWISE committee

2

87. See response to comment 87 on previous page.

88. If Alternative C is selected, actions on Spearfish Canyon 2 would be expected to continue until implementation of West Rim begins, likely in late 2009 or 2010. Currently, Spearfish Canyon 2 is approximately 50 percent complete.

Many of the fuel reduction treatments in the Canyon proposed under Alternative C would overlap treatments planned but not yet completed under the Spearfish Canyon 2 CE. This creates a conflict regarding who would be responsible for conducting the treatments: the Forest Service under Spearfish Canyon 2 or the landowner under West Rim. Therefore, it was decided to super cede Spearfish Canyon 2 with West Rim because the West Rim treatments would provide a larger area of defensible space than those authorized under Spearfish Canyon 2.

chairman and the Lawrence County FIREWISE person as we began this effort.

These joint activities and USFS efforts under Spearfish Canyon 1 and 2 have been very positive in convincing SCOA members that USFS was trying, within all their priorities and resource limitations, to improve the fuels reduction/fire suppression status within the Canyon. That goodwill and cooperation painfully constructed over the past several years would be jeopardized if USFS does not complete Spearfish Canyon 2. Further, if this EIS, Alternative C were to be selected for approval in 2008 and SPF Canyon 2 were terminated(incomplete), there would be no USFS fuels reduction activity in Spearfish Canyon until 2010, considering when funding would become available for West Rim.

Therefore, SCOA supports West Rim, Alternative C, if satisfactory resolution of a "management and operating plan" is developed such that homeowners understand what their commitment has to be, including funding that may be available to them, such that they can make a reasoned decision on a joint plan that would not become prohibitively expensive for them to initiate. And, SCOA support is also dependent on USFS continuing Spearfish Canyon 2 until complete. It may be useful for USFS to conduct a meeting of all homeowners(all in the West Rim project area, not just the Canyon) to describe and gain feedback on how the 300 foot buffer would be implemented and funded, once it is clear what that approach is to be.

The issue of treatment for the highly visible and expanding beetle infestation near Cheyenne Crossing needs resolution. Recently, Ranger O'Byrne has proposed to address this as a special effort to be approached as a Categorical Exclusion. SCOA agrees with that approach, since this effort is not proposed to be part of West Rim, nor is it included in the original draft of the Telegraph Project, for which SCOA has provided comments. The infestation needs treatment as soon as possible since it could be a serious infestation before Telegraph is implemented.

SCOA has met and coordinated with the Timber Committee of Lawrence County, Bill Coburn/chairperson, and we can support their Summary Comments. Those comments also support a Categorical Exclusion for near term effort by USFS to address the beetle outbreak near Cheyenne Crossing. SCOA will continue to coordinate with the County and State agencies in developing approaches to involve owners in fuels reduction work on private property, in support of Alternative C.

We agree with the Timber Committee that efforts in the 300 foot buffer around structures, as proposed in Alternative C, should not limit removal of trees greater than 9" in diameter. We also appreciate the Timber Committee's support for completing the Spearfish Canyon 1 and 2 fuels reduction projects.

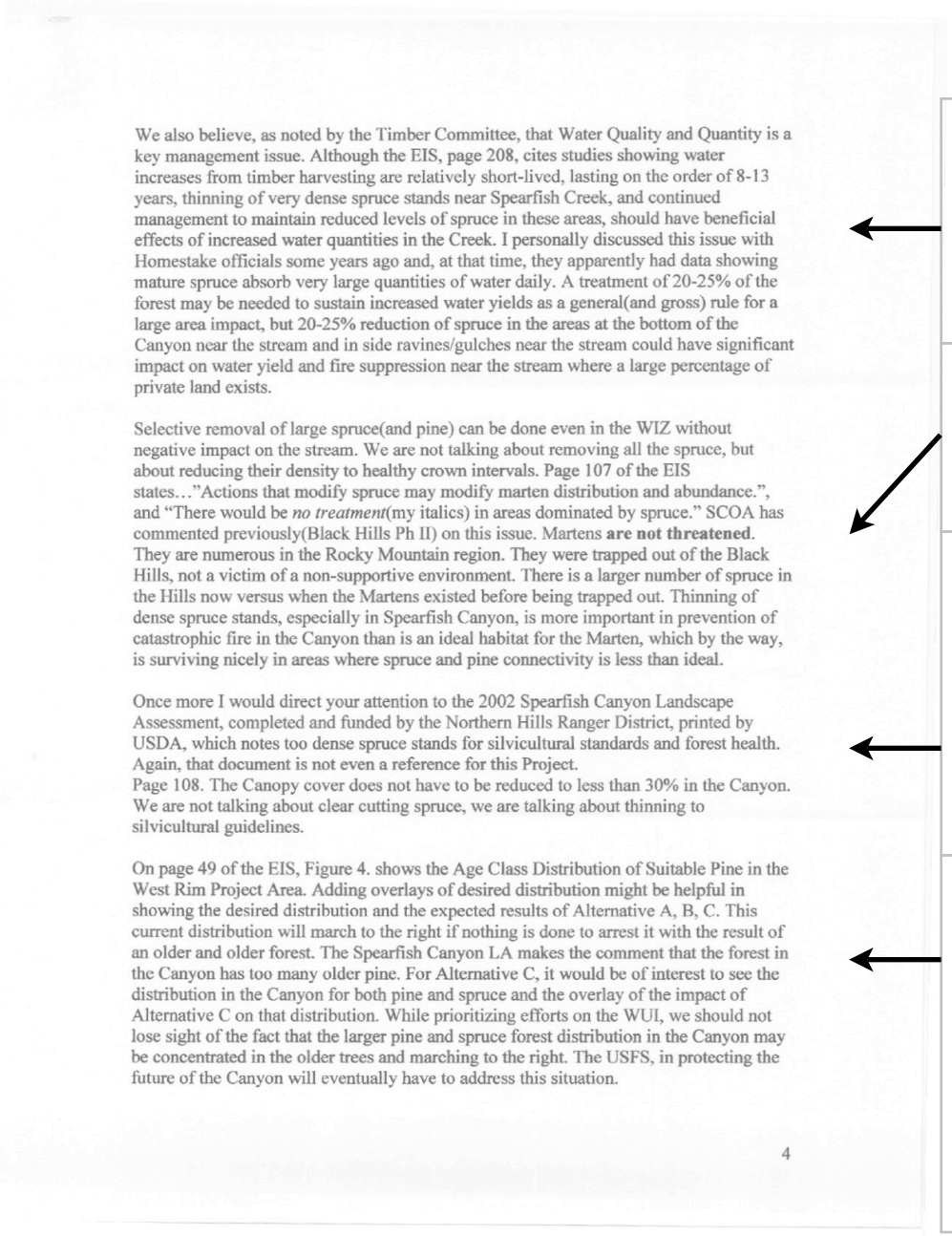
3

88. See response to comment 88 on previous page.

89. The mountain pine beetle infestation near Cheyenne Crossing is mostly outside of the West Rim Project Area (see FEIS pages 26 and 36). This project also allows for quick response to mountain pine beetle infestations through sanitation harvest (see FEIS page 36).

    The infestation was also found to be outside of the Telegraph project area, which led to the idea of addressing it with a CE, which could be implemented sooner than the Telegraph project (if the boundary for Telegraph had been altered to include the infestation). Telegraph will also include a sanitation harvest clause, allowing the Forest Service to quickly respond to infestations within that project area.

90. Thank you for your comments. Please see response to comment 8 on page D-9.



We also believe, as noted by the Timber Committee, that Water Quality and Quantity is a key management issue. Although the EIS, page 208, cites studies showing water increases from timber harvesting are relatively short-lived, lasting on the order of 8-13 years, thinning of very dense spruce stands near Spearfish Creek, and continued management to maintain reduced levels of spruce in these areas, should have beneficial effects of increased water quantities in the Creek. I personally discussed this issue with Homestake officials some years ago and, at that time, they apparently had data showing mature spruce absorb very large quantities of water daily. A treatment of 20-25% of the forest may be needed to sustain increased water yields as a general(and gross) rule for a large area impact, but 20-25% reduction of spruce in the areas at the bottom of the Canyon near the stream and in side ravines/gulches near the stream could have significant impact on water yield and fire suppression near the stream where a large percentage of private land exists.

Selective removal of large spruce(and pine) can be done even in the WIZ without negative impact on the stream. We are not talking about removing all the spruce, but about reducing their density to healthy crown intervals. Page 107 of the EIS states…"Actions that modify spruce may modify marten distribution and abundance.", and "There would be *no treatment*(my italics) in areas dominated by spruce." SCOA has commented previously(Black Hills Ph II) on this issue. Martens **are not threatened**. They are numerous in the Rocky Mountain region. They were trapped out of the Black Hills, not a victim of a non-supportive environment. There is a larger number of spruce in the Hills now versus when the Martens existed before being trapped out. Thinning of dense spruce stands, especially in Spearfish Canyon, is more important in prevention of catastrophic fire in the Canyon than is an ideal habitat for the Marten, which by the way, is surviving nicely in areas where spruce and pine connectivity is less than ideal.

Once more I would direct your attention to the 2002 Spearfish Canyon Landscape Assessment, completed and funded by the Northern Hills Ranger District, printed by USDA, which notes too dense spruce stands for silvicultural standards and forest health. Again, that document is not even a reference for this Project.
Page 108. The Canopy cover does not have to be reduced to less than 30% in the Canyon. We are not talking about clear cutting spruce, we are talking about thinning to silvicultural guidelines.

On page 49 of the EIS, Figure 4. shows the Age Class Distribution of Suitable Pine in the West Rim Project Area. Adding overlays of desired distribution might be helpful in showing the desired distribution and the expected results of Alternative A, B, C. This current distribution will march to the right if nothing is done to arrest it with the result of an older and older forest. The Spearfish Canyon LA makes the comment that the forest in the Canyon has too many older pine. For Alternative C, it would be of interest to see the distribution in the Canyon for both pine and spruce and the overlay of the impact of Alternative C on that distribution. While prioritizing efforts on the WUI, we should not lose sight of the fact that the larger pine and spruce forest distribution in the Canyon may be concentrated in the older trees and marching to the right. The USFS, in protecting the future of the Canyon will eventually have to address this situation.

4

91. The 20-25% referenced in the DEIS is the percentage of the entire watershed that would need to be harvested and maintained in a clear-cut condition through continued timber harvesting. Spruce have not been shown to use more water than other tree species and since they occupy a small portion of the watershed, they would only use a small portion of the water yield of the basin. Harvesting spruce to increase water yield is not supported by the research.

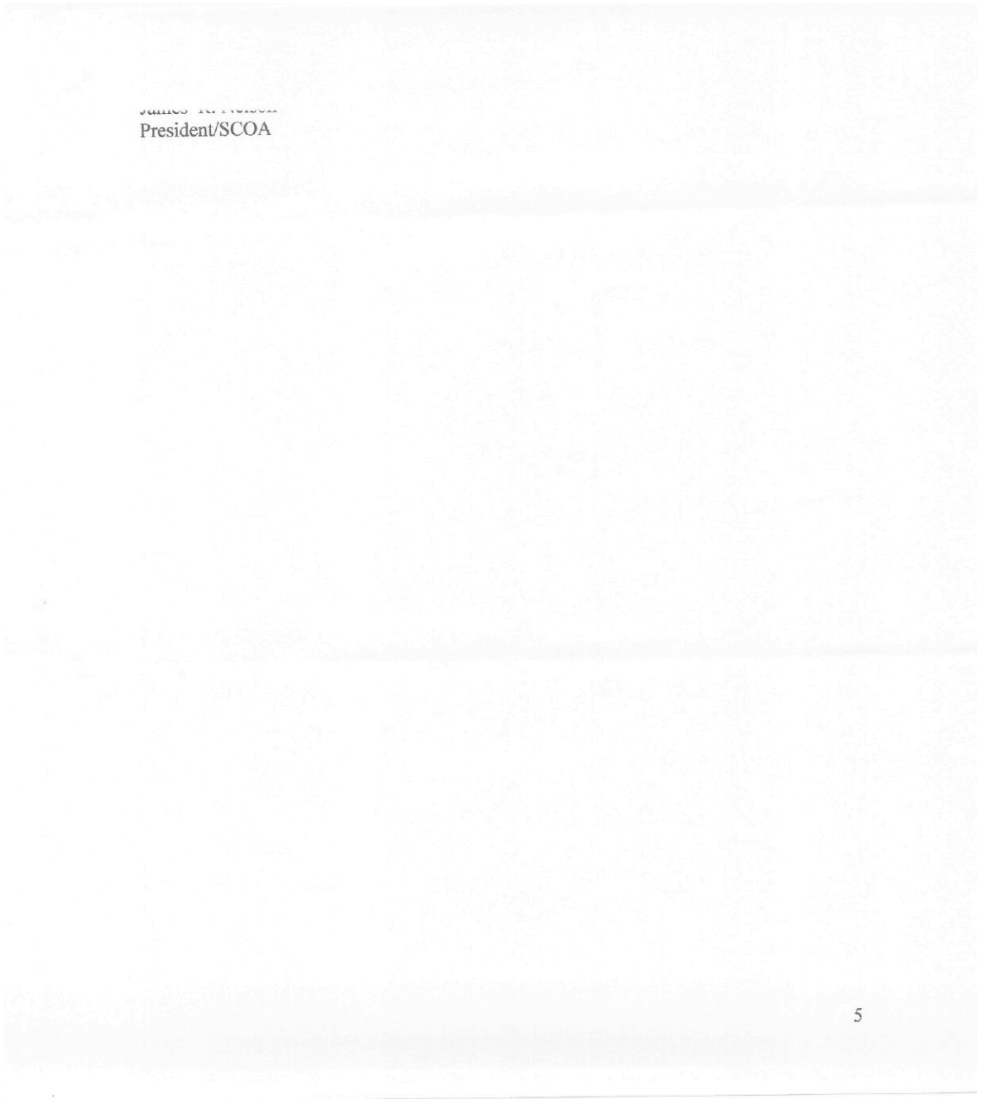
92. WUI treatments are designed to balance the needs of wildlife and protection from wildfire. Spruce provide habitat for numerous species with emphasis status including but not limited to American Three-toed woodpecker, Flammulated Owl, American Marten and Cooper's Mountain Snail.

93. Management direction for Spearfish Canyon is contained within the Forest Plan and all activities proposed under the West Rim project must adhere to Forest Plan standards and guidelines. The Spearfish Canyon Landscape Assessment is not intended to direct management of the Canyon, but rather to assess the landscape conditions.

    The myriad of scenic, recreation, wildlife and botanical resources in the Canyon greatly limit the amount of timber harvest and related ground disturbance that can occur.

94. The Forest Plan does not have objectives specific to the age class distribution for suitable pine. However, the plan does set objectives for the distribution of forest structural stages which roughly correspond to forest age. See section 3.3.2 of the FEIS for a discussion the potential effects on the age class distribution of suitable pine as well as an assessment of the future distribution of structural stages in Management Areas 4.1, 5.1, 5.4, and 5.6.

    Forest stands within Spearfish Canyon (MA 4.2A) are not managed for timber production and there are no structural stage objectives set for this area. The forest stands within the Canyon are predominately mature.


President/SCOA

5

Letter - 8

Type - Organization

Spearfish Canyon Society

The Society is a 501(c)(3) not-for-profit and a 509(a)(1) public charity. **spearfishcanyonsociety.com (*coming soon*)**

June 18, 2008

Comments to USFS
Black Hills National Forest

Comments on West Rim Project

Wildland Urban Interface (WUI)

The Society remains confused to the addition of the Wildland Urban Interface concept in Alternative C to the West Rim Project for Spearfish Canyon. We applaud the effort to minimize forest fire impact on private structures within the canyon, however the arrangements and Agreement appear vague, and, possibly, inappropriate.

The DEIS reads: 2.2.3. The fuel management buffers would extend 300 feet from all structures in the Project Area and some additional areas in Spearfish Canyon including both private and NFS lands.

3.3.2. The fuel reduction treatments are dependent on landowners entering into agreements with the Black Hills National Forest and so the amount that would be implemented is unknown. It is likely that only a subset of the buffer areas would be treated. However, the effects analysis assumes full implementation of these buffer treatments.

I. **Buffer**:

a. Is the Forest Service proposing the costly fuel reduction treatments in the 300' buffer to structure even when the buffer may be on private ground?

Comment: If so, will the property owner be assessed for the Forest Service costs that occur on the private property? It is inappropriate for public funds to be expended on private property.

b. Or, will the property owner pay a contractor to treat the distance of buffer that is within the private property and the Forest Service treat the buffer remainder that lies in the public domain?

Comment: If so, it would appear counterproductive for the Forest Service to engage in fuel reduction treatments on the public portion of the buffer if the

Spearfish Canyon Society, 1115 N. 3rd Street, Spearfish, SD, 57783, 605-722-8798, spearfishcanyon@rushmore.com
Board of Trustees: Jerry Boyer, Spearfish, SD; Tony Dean, Pierre, SD; Paul Higbee, Spearfish, SD; Shane Sarver, Spearfish, SD; Greg Young, Spearfish, SD

95. The USFS does not have the jurisdiction to conduct treatments on private land. Any fuel reduction treatments conducted on private land are the responsibility of the landowner. The 300 ft. buffers identified in Alternative C do contain some private land, but the West Rim EIS only analyzes the effects of treating the National Forest System portion of those buffers. Treatment of any portion of each individual buffer, federal or private, would be done solely at the discretion of the private landowner. Federal funds would not be expended on private property under the West Rim project.

96. Alternative C of West Rim would authorize each landowner in the project area to conduct treatments, as bounded by the restrictions identified in the FEIS, on National Forest System (NFS) lands within 300 feet of each inhabited structure. Each landowner that wishes to conduct treatment on the NFS land within 300 feet of their home would be required to submit a treatment plan to the USFS for approval and either implement the treatment themselves or enlist a contractor to do so. The USFS is not proposing to conduct treatments on any portion of the 300 foot buffers; the West Rim FEIS merely analyzes the effects of and authorizes the treatments of the NFS portions of those buffers by private landowners. Each landowner is free to manage their private land in any way they see fit.

private property owner chooses not. It is appropriate that USFS seek to help those who first help themselves.

II. **Aesthetic Qualities:** Will the proposed fuel reduction treatment in the WUI further expose the structures to view along the scenic byway?

Comment: In order to preserve the natural aesthetic qualities of Spearfish Canyon along the state and national scenic byway, the Society recommends that the proposed treatment is more appropriate on the backside of structures adjoining the public forest, and no thinning along the frontage facing the creek and byway. This recommendation seeks to preserve the natural character of this miraculous public landscape (95% of canyon landmass in public domain) and prevent any one recreational activity (recreational homes) from dominating the viewscape.

This recommendation, "landscapes adjacent to the road corridors appear natural", is consistent with the management objectives and desired future conditions contained in the Black Hills National Forest, Management Area 4.2A, and the Spearfish Canyon Corridor Management Plan.

97. In order to provide fuel reduction and treatment, the entire structure (residential home) needs to be protected and this may at times require extensive thinning around structures. Thinning levels will keep the scenic and landscape character goals and objectives of the Forest Plan in mind while at the same time trying to provide protection to the structure (fuel reduction) in case of a wildfire.

Thank you for the opportunity to comment.

Jerry J. Boyer
President & Trustee

Northern Hills Ranger District

Memo

Letter - 9

Type - Individual

To: Chris Stores & Brad Piehl

From: Jackie Groce

CC: West Rim Project Record

Date: June 4, 2008

Re: Comment on the West Rim DEIS from Mark Barnett

Today I received a telephone call from Mark Barnett. He attempted to submit comments on the West Rim DEIS via the e-mail address provided in the form letter that he received, but he was not successful. He decided to submit comments regarding that project to me via the telephone.

Mark indicated that he strongly favored either Alternative B or C and that he is in support of the Forest Service's efforts to conduct thinning on the Black Hills National Forest.

He would like to be made aware of the decision regarding the project once it is made.

98. Thank you for your comments.

1

"BONNIE CARR"
<tbcarr2@msn.com> To: <comments-rocky-mountain-black-hills-northern-hills@fs.fed.us>
cc:
06/27/2008 11:17 AM Subject: west rim project

Letter - 10

Type - Individual

I am responding to the news article for input regarding the west rim plan.

I am in favor of treating the pine beetle infestation, logging and prescribed burning. It seems to me that Alternative C covers more land and would ease the risk of fire more.

Thanks for allowing input.

Bonnie Carr
Spearfish

99. Thank you for your comments.

NEIMAN ENTERPRISES, INC.

SPEARFISH FOREST PRODUCTS, INC.
1510 W. OLIVER ST. • P.O. BOX 910
SPEARFISH, SD 57783

T:(605) 642-7741 • F:(605) 642-5902

Letter - 11

Type - Business

July 18, 2008

Ms. Rhonda O'Byrne
District Ranger
Northern Hills Ranger District
2014 N Main Street
Spearfish, SD 57783

Dear Ms. O'Byrne:

First, it is important to note that Neiman Timber Company LC and our 3 sawmills which directly employ over 500 people are very dependent on the USFS timber sale program selling at least 110 million board per year from the BHNF. The timber from projects like West Rim are the lifeblood of our industry.

We understand and appreciate the dedication and hardwork your staff has done on the West Rim Project. It is a huge task and carries a tremendous responsibility to do the best job for the public and the environment. We have reviewed the draft Environmental Impact Statement and would like to provide you the following comments and recommendations.

Purpose and Need.
The Purpose and Need is narrowly focused on forest health issues and we agree with that. Fire and bugs have had a very negative impact on the Black Hills National Forest over the last 10 years beginning with the Beaver Park infestation, the Jasper Fire, Grizzly Gulch fire etal and now an extensive mountain pine beetle epidemic. Hopefully through the Phase 2 Amendment with it new goals and objectives the Black Hills National Forest will return to a healthier level. Your third purpose and need to improve the structural diversity will also be extremely beneficial in improving the overall balance of age and structural classes.

100.Thank you for your comments.

Alternatives

We support Alternative C with modifications . It provides the same level of commercial timber harvesting as Alternative B with additional treatments planned for WUI areas. We encourage you to choose Alternative C with these modifications. Foremost we would like to see you waive the less than 9 inch dbh treatment limitation. It is hard to imagine trying to effectively tree the WUI areas around the homes and cabins in Spearfish Canyon, Iron Creek Lake, Tollgate Flats and Terry Peak subdivision and not be allowed to cut trees 9 inches or bigger. We do not believe that the small impact that these treatments might have on the snail population should trump implementing the types of treatments that Federal, State and County experts prescribe in WUI areas.

Design Criteria

All Activities

Meadows

We recommend that skid trails, landings, and temporary roads be allowed in meadows unless there is some reason not to allow those on a site-specific basis. The terminology is worded such that activities associated with harvesting be "avoided as much as possible", which could easily be interpreted as "No skid trails, landings or temporary roads will be allowed in meadows." These meadows play and have played an important role in staging different aspects of the harvest as well as piling and burning slash.

Rare Plant Species

What qualifies as Rare Plant Species. We find no reference to it in the Phase 2 Amendment. Are we talking about Sensitive Species and/or Species of Local Concern? The design criteria for these plants is very rigid which concerns us because complete avoidance of Species of Local Concern has the potential to prohibit timber harvesting and all other forest management activities from a

98. Please see response to comment 98 on page D-58

84. Please see response to comment 84 on page D-46.

71. Please see response to comment 71 on page D-43.

101. The heading of "rare plant species" was used for the design criteria that pertain to the management and protection of R2 sensitive plant species and plant species of local concern. The design criteria do call for avoidance of these plant species and suitable habitat when possible. Some exceptions have been made to allow for management activities needed to meet the purpose and need of the project. These include the building of road across suitable habitat, the inclusion of suitable habitat within proposed prescribed burn blocks, and fuel reduction treatments within suitable habitat. Alternatives B and C were designed to reduce the risks of insects and wildfire in the area and at the same time preserve the rare and unique flora found the area.

significant amount of area. On this project it appears that at least 6400 acres will be avoided.

Timber Harvest

Harvest

It is very important that the USFS not try to micromanage the type of machinery that the purchaser is suppose to use unless there very important reasons to do so. Allowing for flexibility is very important to getting the job accomplished efficiently and correctly. We have some concerns regarding the statement that log length yarding is the preferred method of timber removal and assume that you are describing a cut to length harvesting system. Who has determined that and is that the Districts decision or just one specialist? If USFS is concerned about fuel loading then whole tree yarding should also be considered. Each logging method has its advantages and disadvantages depending on the ground conditions and the land management objectives. For example tree length harvesting has also been shown to be very effective in protecting regeneration during the harvest process. Where fuel loading is a concern whole tree logging is probably the best option when removing a significant amount of timber in areas. We would also recommend that the USFS should decide the desired future condition and then allowing the purchaser to determine the best way of getting there. For example a stand may have 5000 seedling and/or sapling per acre for regeneration. The BHNF standard for an adequate stocked stand of regeneration is 300 trees (seedlings) per acre. That means only 6% of the regeneration would have to be saved per acre to meet the adequately stocked standard. This is about a 12 x 12 foot spacing . If the USFS would limit the understory mortality to say 50% then the purchaser would be allowed to decide what harvest system to use to meet the desired future condition and in this case actually reduce the cost of thinning the stand. Another concern is that there are many stands that have advanced regeneration that are being burned. It makes no sense to us that we go through significant effort to protect this regeneration and after we finish the USFS burns

102. Thank you for your suggestions regarding specifying desired out comes rather than specifying methods for reaching those desired out comes. Your comments will be considered. Please also see the response to comment 64 on page D-44.

the site. We would request that stands with this advanced regeneration not be considered for prescribe burning.

We question whether there is a need to time the harvest entries to promote better regeneration success. We have not seen many sites where it has been difficult to get the stand to regenerate.

We believe there are some excellent opportunities for skyline yarding within this project. With this we also encourage the USFS to carefully evaluate which sites it categorizes for cable yarding. It helps no one including the USFS to designate an area that could be harvested and most cases has been harvested by a skidder as skyline yarding. This harvest method is very expensive and should be restricted to terrain that cannot be operated on by any other logging system.

Road Restrictions

We would recommend that the USFS should consider using slash as an obstruction to discourage driving around gates and barriers. Scattering heavy slash for several hundred feet around access points provides a significant physical obstacle for vehicles.

Recreation

Regarding snowmobiles and timber harvesting it is important that the SD GFP, USFS and the purchaser work together in planning out the proper operating season and transportation routes. The state has been easy to work with in finding alternative routes for snowmobiles in the past and we would guess that is not going to change.

Scenery

We recommend that the USFS not try to hide or camouflage their forest management activities. Some discretionary adjustments in the locations for log decks and slash piles is appropriate to plan for but we encourage the USFS that

103. Establishing adequate natural regeneration is not normally a problem within pine stands in the area. The preference for harvest of these units during summer and fall is so that there is some scarification of the ground to provide a good seedbed and to ensure that the areas are brought up to full stocking within five years of harvest. There is some flexibility written into the design criteria with regards to the timing of the harvest of these units.

104. No specific harvest methods have been assigned to individual units in West Rim. The EIS simply analyzes the effect of specific treatment prescriptions. The method of achieving the prescription for each unit will be determined at the time of implementation.

In some cases, such as on units with highly erosive soils or soils that are prone to mass movement, skyline yarding may be preferable to reduce the impact of skid trails across the unit. Often, these units would be located on terrain that is unfavorable to skidding.

105. Illegal use of closed roads can be a problem. Specific closure methods would be evaluated for each road and designed to fit the need. Thank you for your suggestion.

106. On page B-5 of the FEIS is a design criterion, which states: "Snowmobile trails would be shown as improvements on timber sale area maps and protected during harvest operations. An evaluation of the potential for conflicts between logging and trail use would take place at the time of timber sale appraisal and contract preparation. If conflicts appear likely between use of the snowmobile trails and specific logging units or haul routes, logging would be restricted between December 1 and March 31 unless a logical and desirable alternative snowmobile route is identified. Only those units and/or roads in conflict would be restricted so that logging operations could continue in the remainder of the sale area."

107. See response to comment 107 on following page.

we not "tiptoe" around the forest so not to offend a few people who are going to be against logging no matter what you do. The vast majority of people will not care or will give very little consideration to whether the edge of timber harvest unit is 100 feet or 300 feet from a highway. We do recommend however that overstory removal units should minimized on skylines next to highways because they have the greatest opportunity for and the highest impact on viewing. These areas also have a high susceptibility to windthrow as is addressed by your design criteria. We would suggest that you change Highway 385 to 85.

Rare Plant Species

We have a serious issue with the recommendation that all sensitive species and species of local concern be avoided by timber harvest activities. Based on the criteria shapefiles this avoidance for all plants and animals removes approximately 7000 acres from being considered for management activities. We also question why with the passage of the Phase 2 amendment that was designed to protect sensitive species and of SOLC that the USFS is now only recommending avoidance as the only way to protect SOLC.

Historic land use in the Black Hills, particularly fire suppression, has likely altered the distribution of boreal habitats and led to an increase in spruce (Hornbeck et al. 2003f). Therefore, the amount of potential habitat for *Lycopodium complanatum* may have increased; however, it is not known if microhabitat conditions needed by *Lycopodium complanatum* are present in the spruce expansion locations.

BHLRMP 1997 and P2 revision.

Soil and Water

The design criteria recommends that in stands where slopes exceed 55% overstory density should not go below 60 square feet of basal area. This parameter will prohibit any overstory or seedcuts to be applied to these stands. We are unsure where this measure comes from and what basis it is made on. It will make it very hard to meet forest structural objectives for the forest in general and in some projects impossible. We believe also that slopes with south and west exposures

107. Thank you for your comment. However, sensitive viewer groups within the Project Area consist of rural residences, travelers along federal and state highways, as well as major and secondary routes through the forest. These areas are designated with High Sensitivity levels (Sensitivity Level 1) and High to Moderate Scenic Integrity. In order to maintain these levels it is important to mitigate and preserve the natural surroundings, which is a part of the Desired Conditions of the forest (See Section 3.13.3).

Landscape visibility is important for its scenic quality, aesthetic values, and landscape merits. Sensitivity Level 1 travelways attract a higher percentage of users having high concern for scenic quality, thus increasing the importance of those travelways. Residences occur in Spearfish Canyon along US 85 and 14A. Some residences are located in more remote areas on private parcels within the forest and along NFS primary and secondary routes. Dispersed recreational uses occur throughout the forest area. All of these uses warrant consideration in overall forest management. Maintaining the natural appearing visual environment is the objective of the Forest Plan, therefore visually sensitive management practices are preferred when possible to implement.

108. Please see response to comment 10 on page D-10.

109. The criteria comes from Forest Plan Standard 1108. It is intended to avoid mass movement due to tree removal and consequent loss of ground stability. There are only 3 acres that meet this criteria (FEIS page 221).

especially around WUIs should be managed with a lower basal areas because they dry out earlier and preheat easier which increases the fire severity significantly. Many of these slopes are presently carrying much higher stocking levels than presettlement times and that has made the risk much worse. To make matters even worse most large fires in the Black Hills burn from south to north due to predominantly hot south winds in the summer. When wildfires hit these slopes they burn aggressively up the hill to the top of the ridge where they spot down and across to the next draw bottom. The Lawrence County CWPP recommends that these slopes in WUI areas need more aggressive treatments to provide greater open spaces to influence fire behavior.

109. Please see response to comment 109 on previous page.

It appears that Standard 1102(a) has been misinterpreted. Under Nutrient Loss on page 216 and 217 the USFS states that "All surveyed soils have the potential of soil organic matter content at less than two percent. Those soils would require the following design criteria be implemented to comply with 1102.
-Conventional harvest systems that retain the slash would be used within the specified soil map units or
-If whole tree harvesting is used, fine slash (less than 3 inches in diameter) would be returned to the site in quantities identified"

110. All surveyed soils in the West Rim Project Area meet the criteria of topsoil organic matter less than two percent (see page 14 in the Hydrology and Soils Resource Report for the West Rim Project (JW Associates 2008f)). The design criteria (Appendix B) have been changed in regards to slash requirements for Standard 1102.

We do not agree with this interpretation. 1102 (a) only applies to certain types of soil as described below

1102. Maintain or improve long-term levels of organic matter and nutrients on all lands. STANDARD (Regional WCP Handbook Standard 14)

a. On soils with topsoil thinner than 1 inch, topsoil organic matter less than 2 percent, or effective rooting depth less than 15 inches, retain 90 percent or more of the fine (less than 3 inches in diameter) logging slash in the stand after each clearcut and seed-tree harvest, and retain 50 percent or more of such slash in the stand after each shelterwood and group-selection harvest, considering existing and projected levels of fine slash. GUIDELINE

In the Design Criteria for Soil and Water requirement #5 (pg. B-6) and the top of pg. 217, it appears that all of the units in the West Rim project will require either a.) conventional harvest systems that retain slash or b.) if whole tree harvesting is used, 50-90% of all slash less than 3" in diameter would be returned to the site per Forest Plan Guideline 1102 (a). In contrast, on pg. 69, "whole tree yarding is recommended for all commercial harvest treatments proposed except for units with overstory removal, topography and other ground based harvesting constraints". The USFS wants to use whole tree harvesting because "it limits the amount of surface fuels added to the stand during harvesting…..typically leaving "approximately 25% of the total created fuels in the unit". If this is the case whole tree logging should not be detrimental to the soil organic content and we recommend that you allow either whole tree harvesting or conventional logging without requirement for returning slash to the site on all areas except where 1102a specifically applies .

110. Please see response to comment 110 on previous page.

Wildlife

We are concerned about the influence of SOLC snails on the project objectives and recommend to the USFS that it balance them with the purpose and need and WUI concerns

111. The West Rim alternatives were designed to achieve the stated purpose and need as well as possible while still adhering to the standards and guidelines in the Forest Plan. The ID team developed Alternative C in a manner that would best balance the conflicting issues of reducing fuels in Spearfish Canyon and avoiding disturbance or destruction of sensitive snail habitat.

Aspen Stands

We do not agree with the mitigation measures of cutting and hinging all conifers within Hardwood Enhancement Units. There are many areas where there will not be enough conifers to establish some type of barrier for elk and deer.

81. See response to comment 81 on page D-45

Spruce Habitat

We are not in agreement with the Design Criteria that has been established for spruce management. BHLRMP and Phase 2 Objective 200-01 does not prohibit spruce treatments in spruce stands. There is actually now over 26,000 acres of spruce stands in the BHNF which is 30% more than the target acreage. This

64. See response to comment 64 on page D-42.

objective allows for a decline of spruce through time. In addition, we question the definition of what spruce dominated stands is.

- Objective 200-01 targets to manage for 20,000 acres of spruce across the Forest using management to achieve multiple use objectives. This objective allows a decline from the approximately 25,000 acres of spruce on lands administered by the Forest to be able to treat spruce for other needs: spruce is to be treated within 200 feet of buildings to reduce fire-hazard conditions, where spruce has encroached into hardwoods, and for the conservation of various Forest emphasis species. The 20,000-acre objective is 5,000 acres more than historical acreage estimates and similar to the 1995 spruce type acreage level.

The harvest of spruce within 200 feet of buildings should apply to Spearfish Canyon area. The 26,000 acres does not include areas where spruce is taking over the seral pine stands. We are very concerned that this type conversion is not being recognized and dealt with by the USFS.

Prescribe Fire

Burn Plan

The single largest type of treatment is prescribe burning. The USFS is proposing to burn over 13,000 acres. We continue to support well planned prescribe burns where stands are pretreated by mechanical means to reduce stocking and live fuel levels. In our scoping comments and GIS information we indicated to the USFS that they were planning on prescribe burning some stands that have high stocking levels and crown closure. Prescribe burning stands with this type of stand condition that have not had recent prior harvest treatments is very risky and does little to mitigate fuels problems and improve forage. We are also concerned that there are no design criteria for mortality and no mention of mortality standards for overstory. In past projects the USFS stated that overstory mortality would be limited to 10% or less for the entire prescribe burn. We are very concerned that without such parameters the USFS will have no incentive to limit mortality to the forest overstory. We also would suggest that the USFS include some provision for salvage logging to occur if the prescribe burn kills a significant amount of the overstory. Another concern is that we would like to see the USFS not burn stands where the understory is advanced in age and adequately stocked. It make no sense

64. Please see response to comment 64 on page D-42.

9. Please see response to comment 9 on page D-9.

to kill 20 year old understory only to later on apply some type of regeneration harvest to then regenerate the stand again.

Rare Plant Species

The mitigation measures specify that plant habitat within the burn units will not be directly ignited. From this it appears that there will be areas where Rare Plant Species reside that will be within the boundaries of the prescribe burning units. We question whether burning is less of a impact on these plants than timber harvesting. In many cases timber harvesting could be timed when the plants have either died or hibernated and there is snow cover. Burns have the potential to also dramatically increase the invasive weed problems.

Summary

We appreciate the opportunity to comment on the West Rim Project and respectfully request that the USFS seriously consider our recommendation and observations in designing and choosing the alternative.

Sincerely,

Dan Buehler

Neiman Timber Company LC

112. There are no known R2 sensitive plant species or plant species of local concern located within the areas proposed for prescribed burning, but suitable habitat for these species is present. Due in part to the design criteria, it is estimated that very little of the suitable plant habitat within the burn blocks will actually burn. See "Effects of prescribed burning" in section 3.6.2 of the FEIS for more details on the estimated impacts on suitable habitat within these burn units.